

A MAGAZINE
FOR

THE FARM
AND HOME

THE CANADIAN THRESHERMAN AND FARMER

Vol. IX.

WINNIPEG, CANADA, JUNE, 1907.

No. 6.

Dairying, A Fine Art

Its Place In Art, Music, and Literature.

(By PEARL RICHMOND)

"Where are you going, my pretty maid?
'I'm going milking, kind sir,' she said.
'May I go with you, my pretty maid?'
'Yes, if you please, kind sir,' she said.

How often have I heard farmers' wives and daughters say:

"Oh, milking and butter making is pure drudgery!"

Did it ever occur to you that no subject has been and is more popular in music, literature and art than the dairy maid and her cows?

Many a noble youth has voiced his emotions in song when cupid jerked at his heart strings as a plump, happy-hearted dairy maid gracefully swung her pail back and forth on her way to the milking, while he envied even the cows their place in her affections, for the milk maid felt Stevenson's verse:

"The gentle cow, all red and white,
I love with all my heart,
She makes me cream with all her might,
To eat with apple tart.

What would he not have given for the loving pats they received while they patiently waited with gentle half-closed eyelids ready to yield—unresistingly—rich, foaming milk to the pressure of her dimpled hands!

Can any life picture appeal to the eye and heart of the artist more than a line of cows wending their way slowly homeward at the close of day?

Or can one imagine a more restful subject for the artist than a group of satisfied cows lazily basking under shady trees, or quenching their thirst in the sparkling brook, or cooling in placid water—knee-deep in June?

It is such subjects as these that made Weber, Troyou, Bancheur, Corot, W. Frank Calderon, and other artists great; even our own Canadian Bellsmith is gaining national reputation because of his extraordinary ability as a painter of cattle.

Not only do these pastoral scenes occupy an important place in the

field of art but the dairy maid herself is an unexcelled model for the artist. Exercises necessary for the accomplishment of her work form her body into physical beauty. Her well developed shoulders, chest and arms challenge the Greek models.

The dairy maid's rosy cheeks and fair skin also owe their delicate tints to the contact with milk in her work in the dairy, as well as to the fresh air she breathes while at her work. Many extensively advertised complexion lotions contain milk or butter-milk that the dairy maid has quantities of—fresh and free from deadly adulterations.

The old-time love song contains a grain of truth:

"What is your fortune, my pretty maid?
'My face is my fortune, kind sir,' she said.

Truly the plump, well rounded figure of the dairy maid has an enviable position on the pedestal of art.

In music she has been the soul of folk lore song.

"Come, all ye jolly shepherds,
That whistle through the glen!
I'll tell ye o' a secret
That courtiers dinna ken;
What is the greatest bliss
That the tongue o' man can name?
Tis to woo a bonnie lassie
When the kye comes hame!

'Tis not beneath the burgenet
Nor yet beneath the crown;
'Tis not on couch o' velvet,
Nor yet in bed o' down:
'Tis beneath the spreading birk,
In the glen without the name,
Wi' a bonnie, bonnie lassie,
When the kye comes hame.

That the heart can hardly frame!
Wi' a bonnie, bonnie lassie,
When the kye comes hame.

Then, since all nature joins
In this love without alloy,
Oh, wha wad prove a traitor
To Nature's dearest joy!
Oh, wha wad choose a crown,
Wi' its perils an' its fame,
And miss his bonnie lassie,
When the kye comes hame.?"

This subject has furnished material for some of the most sublime word pictures in the great literary productions. It has a prominent place in literature.

Gray opens his famous elegy with:

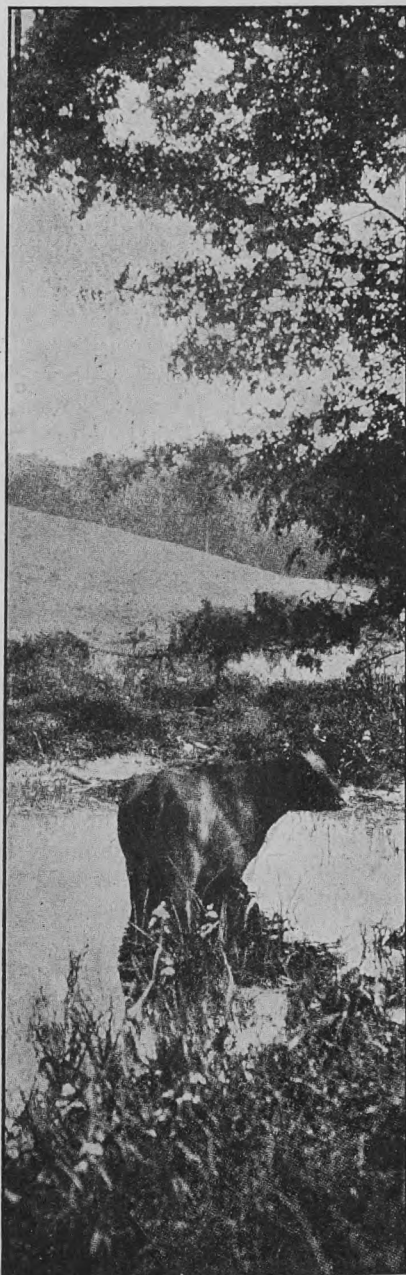
"The curfew tolls the knell of parting day;
The lowing herds wind slowly o'er the lea;
The ploughman homeward plods his weary way,
And leaves the world to darkness and to me."

The author as well as the poet gives the dairy a prominent place in her stories, and lures the youth to a palace of wealth whose king is health, and whose beautiful queen is the dairy maid.

The following description of the dairy in Adam Bede, by one of our greatest novelists—George Eliot—paints a pleasing picture of a dairy and the rare charms of a dairy-maid:

"The dairy was certainly worth looking at; it was a scene to sicken for with a sort of calenture in hot and dusty streets—such coolness, such purity, such fresh fragrance of new pressed cheese, of firm butter, of wooden vessels perpetually bathed in pure water; such soft coloring of red earthenware and creamy surfaces, brown wood and polished tin, gray limestone and rich orange-red rust on the iron weights and hooks, and hinges. But one gets only a confused notion of these details when they surround a distractingly pretty girl of seventeen, standing on her little pattens and rounding her dimpled arm to lift a pound of butter out of the scale.

Hetty blushed a deep rose-color when Captain Dormithorne entered the dairy and spoke to her;



KNEE DEEP IN JUNE.

There the black-bird bighs his nest
For the mate he lo'es to see,
And on the top-most bough
Oh, a happy bird is he!
There he pours his melting ditty,
And love is a the theme;
And he'll woo his bonnie lassie,
When the kye comes hame.

When the blewart bears a pearl,
And the daisy turns a pea,
And the bonnie lucken gowan
Has fauld it up his ee,
Then the lave-rock, frae the blue lift,
Drops down and thinks nae shame
To woo his bonnie lassie,
When the kye comes hame.

See yonder bawky shepherd,
That lingers on the hill;
His yowes are in the fauld,
And his lambs are lying still;
Yet he downa gang to bed,
For his heart is in a flame,
To meet his bonnie lassie,
When the kye comes hame.

When the little, wee bit heart
Rises high in the breast,
And the little, wee bit starn
Rises red in the east,
Oh, there's a joy sae dear



Satisfied and comfortable in the June pasture, the full milk pail is an assured fact.

but it was not at all a distressed blush, for it was unwreathed with smiles and dimples, and with sparkles from under long-curved eyelashes; Hetty tossed and patted her pound of butter with quite a self-possessed, coquettish air, slyly conscious that no turn of her head was lost.

There are various orders of beauty, causing men to make fools of themselves in various styles, from the desperate to the sheepish; but there is one order of beauty which seems made to turn the heads, not only of men, but of all intelligent mammals, even of women. It is a beauty like that of kittens, or very small downy ducks, making gentle rippling noises with their soft bills, or babies just beginning to toddle and to engage in conscious mischief—a beauty with which you can never be angry, but that you feel ready to crush for inability to comprehend the state of mind into which it throws you. Hetty Sorrel's was that sort of beauty.

Her aunt, Mrs. Payser, who professed to despise all personal attractions and intended to be the severest of mentors, continually gazed at Hetty's charms by the sly, fascinated in spite of herself; and after administering such a scolding as naturally flowed from her anxiety to do well by her husband's niece—who had no mother of her own to scold her, poor thing!—she would often confess to her husband, when they were safe out of hearing, that she firmly believed "the naughtier the little hussy behaved the prettier she looked."

It is of little use for me to tell you that Hetty's cheek was like a rose-petal, that dimples played about her pouting lips, that her large, dark eyes hid a soft roguishness under their long lashes, and

that her curly hair, though all pushed back under her round cap while she was at work, stole back in dark, delicate rings on her forehead, and about her white, shell-like ears; it is of little use for me to say how lovely was the contour of her pink and white neckerchief, tucked into her low, plum-colored stuff bodice, or how the linen butter-making apron, with its bib, seemed a thing to be imitated in silk by duchesses, since it fell in such charming lines, or how her brown stockings and thick-soled, buckled shoes lost all that clumsiness which they must certainly have had when empty of her foot and ankle—of little use, unless you have seen a woman who affected you as Hetty affected her beholders, for otherwise, though you might conjure up the image of a lovely woman, she would not in the least resemble that distracting kitten-like maiden. I might mention all the divine charms of a bright spring day, but if you had never in your life utterly forgotten yourself in straining your eyes after the mounting lark, or in wandering through the still lanes when the fresh-opened blossoms fill them with a sacred, silent beauty like that of fretted aisles, where would be the use of my descriptive catalogue?

I could never make you know what I meant by a bright spring day.

Hetty's was a spring-tide beauty; it was the beauty of young frisking things, round-limbed, gamboling, circumventing you by a false air of innocence—the innocence of a young star-browed calf, for example, that being inclined for a promenade out of bounds, leads you a severe steeple-chase over

hedge and ditch, and only comes to a stand in the middle of a bog.

And they are the prettiest attitudes and movements into which a pretty girl is thrown making up butter; tossing movements that give a charming curve to the arm, and a sideward inclination of the round, white neck; little patting and rolling movements with the palm of the hand, and nice adaptations and finishings, which cannot at all be effected without a great play of the pouting mouth and the dark eyes. And then the butter itself seems to communicate a fresh charm; it is so pure, so sweet-scented; it is turned off the mold with such a beautiful, firm surface, like marble in a pale yellow light! Moreover, Hetty was particularly clever at making up the butter; it was the one performance of hers that her aunt allowed to pass without severe criticism; so she handled it with all the grace that belongs to mastery."

Such is the pen portrait of a dairy maid, by one of the leading authors. No world renowned queen could be painted in more perfect bodily beauty than the secluded dairy maid; and richer far is she, than the worshipped social leader because she possesses a freedom of spirit that can never be known by the society butterfly.

Tourists say the cleanest spot in the world is Broek, near Amsterdam, Holland. It is there that one may see absolute cleanliness in dairying. Broek, with its quiet spotless streets and yellow pavements, is a village where neatness reigns supreme, and the shining, tiled roofs and polished trimmings on the little houses defy dust. The paved road shines as if freshly scoured.

When a stranger sees Broek for

the first time, he thinks it has just been washed. Everything seems to shine alike. The little, tiny walks along each tiny garden are spotless. They apparently live in a pail of water because they scrub so much that they are never separated from their pails. Strangers are almost afraid to walk on the streets for fear of getting them dirty. But their dairies—there is not another place in the world where such dairies can be found.

The dairy is under cover with the dwelling. Everything is as neat as a pin in the house where the cows reside and the cheeses are made, and one leefs that he has to take off his shoes before he enters. They even have a carpet on the floor for the cows to walk on. There actually are strips of carpeting all down the walks between the rows of stalls, and something that looks like braided hemp in the bottom of the stalls themselves. Everything is tiled, where it can be, with little tiles, and all these and every bit of the woodwork itself shines beautifully—it is so clean and polished.

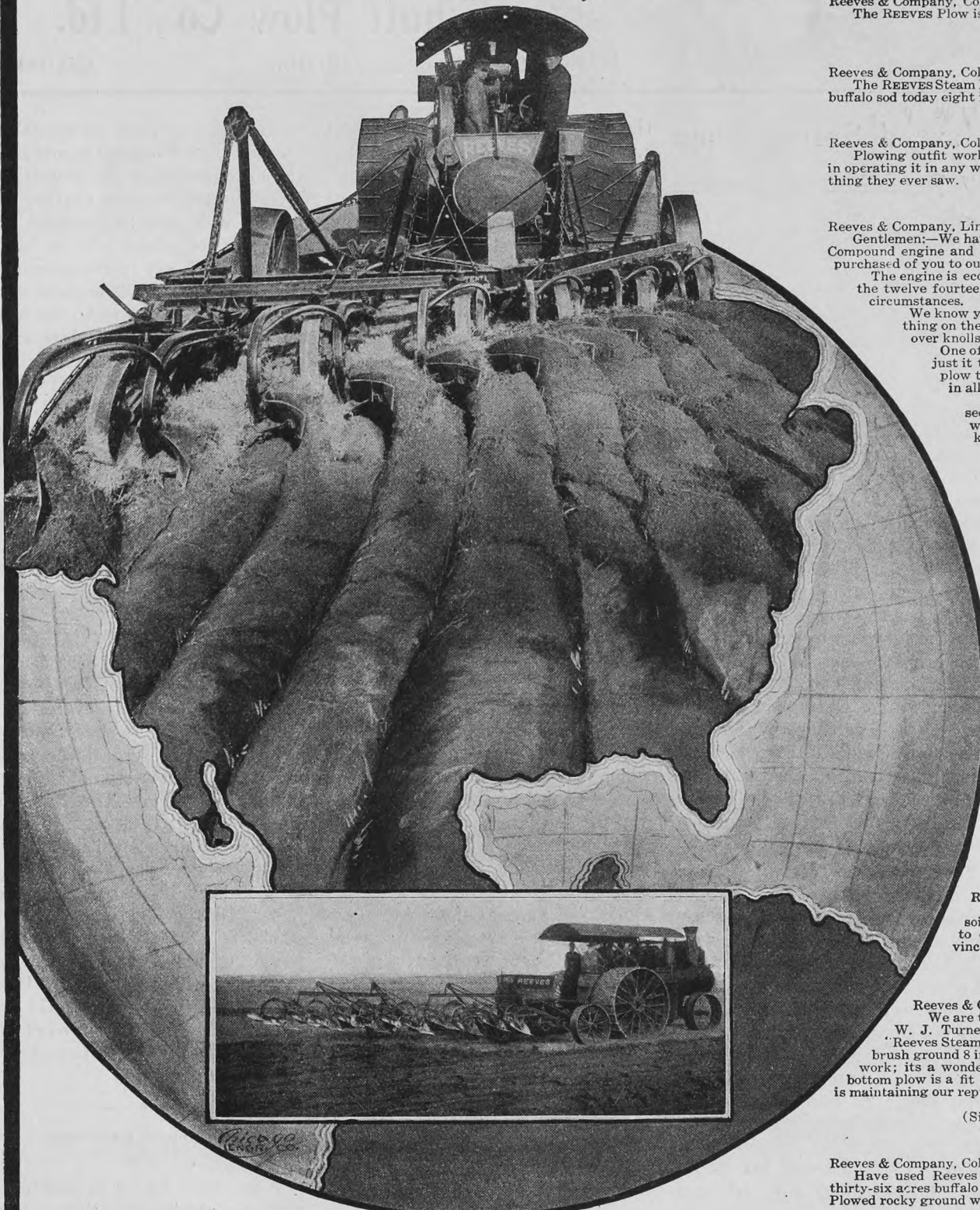
They even have in the dairies hooks to hook the cows' tails up so they will not shake any dirt on their sides—the place is so clean that a fly would be afraid to intrude. The wonderful Edam cheeses made in these dairies are famous because they are made in the cleanest dairies in the world.

THE 10,000,000 cows in the United States produced 1,500,000,000 pounds of butter last year, or an average of 150 pounds each; but since no small part of the milk product was consumed direct, the cows that are engaged in butter production must be credited with a higher average than 150 pounds.

WONDERFUL PLOWING FEATS!

THE REEVES FLEXIBLE STEAM PLOW AND THE REEVES CROSS COMPOUND PLOWING ENGINE SETS THE WORLD'S PLOWING PACE

Reports from the Field.



Pine Bluffs, Wyom., 4-13-'07.
Reeves & Company, Columbus, Ind.
The REEVES Plow is a wonder. I am well pleased.
(Signed) Edwin P. Anderson.

Rawlins, Wyom., 4-18-'07.
Reeves & Company, Columbus, Ind.
The REEVES Steam Plow is a grand success. We plowed tough buffalo sod today eight inches deep.
(Signed) Fred Kindt.

Bovina, Colo., 4-23-'07
Reeves & Company, Columbus, Ind.
Plowing outfit working to perfection. Have had no trouble in operating it in any way. Customers well pleased. Beats anything they ever saw.
(Signed) Wm. Minger.

Alliance, Nebr., 4-23-'07.
Reeves & Company, Lincoln, Nebr.
Gentlemen:—We have tested the thirty-two horse power Cross Compound engine and Flexible Frame Steam lift plows recently purchased of you to our entire satisfaction.
The engine is economical in both fuel and water. Pulls the twelve fourteen inch plows with perfect ease under all circumstances.

We know your plows are an improvement over anything on the market. The way they adjust themselves over knolls and in buffalo wallows is really wonderful.

One of the greatest features is that you can adjust it to plow at any desired depth and it will plow through sand, gumbo and shoestring alike in all. It simply did grand work.

Every one whose pleasure it has been to see it in operation declares it is doing better work than they have ever seen done by any kind of a plow, either steam or horse.

Yours for success,
(Signed) Carr & Lotspiech, by G. B. Carr.

East Las Vegas, N. M., 4-18-'07.
Reeves & Company, Columbus, Ind.
Messrs.:—We are now running the steam plow purchased of you and find it all that can be desired. Notwithstanding the fact that the sod is extremely dry, the engine takes it along at a good clip with no unusual labor, cutting a full swath of fourteen feet with two eight foot packers following. In addition to this we will add a twenty foot harrow. After examining four different steam outfits we decided that the "Reeves" was the best, and after testing it on our own ground we are sure we have not been mistaken in our choice.

Thanking you for your kind and courteous treatment and wishing you success, I remain, Respectfully,
(Signed) W. H. Comstock.

New Castle, Colo., 5-1-'07.
Reeves & Company, Columbus, Ind.
Plowed twenty-eight acres fifteen years alfalfa with hidden rocks. Plows released fifty times; no damage. Can plow anything with Reeves plow.
(Signed) J. L. Herrick.

Julesburg, Colo., 5-5-'07.
Reeves & Company, Columbus, Ind.
Steam Plow started in the worst difficult soil in the State, pulling twelve plows six to eight inches deep; all the skeptics convinced; all hats off to Reeves.
(Signed) J. B. Thompson.

Denver, Colo., 5-4-'07.
Reeves & Company, Columbus, Ind.
We are this morning in receipt of a telegram from W. J. Turner, Mountain Home, Idaho, as follows: "Reeves Steam Plow better than expected; plowed sage brush ground 8 inches deep, everyone delighted with the work; it's a wonder." From this you will see that our ten-bottom plow is a fit running mate for the 12 bottom plow and is maintaining our reputation in the state of Idaho.

Yours truly,
(Signed) Reeves & Co., F. W. Weego, Mgr.

Conrad, Mont., 5-9-'07.
Reeves & Company, Columbus, Ind.
Have used Reeves plow and engine one month. Plowing thirty-six acres buffalo sod in 10 hours in satisfactory manner. Plowed rocky ground with no damage to plow.
(Signed) P. J. Nason.

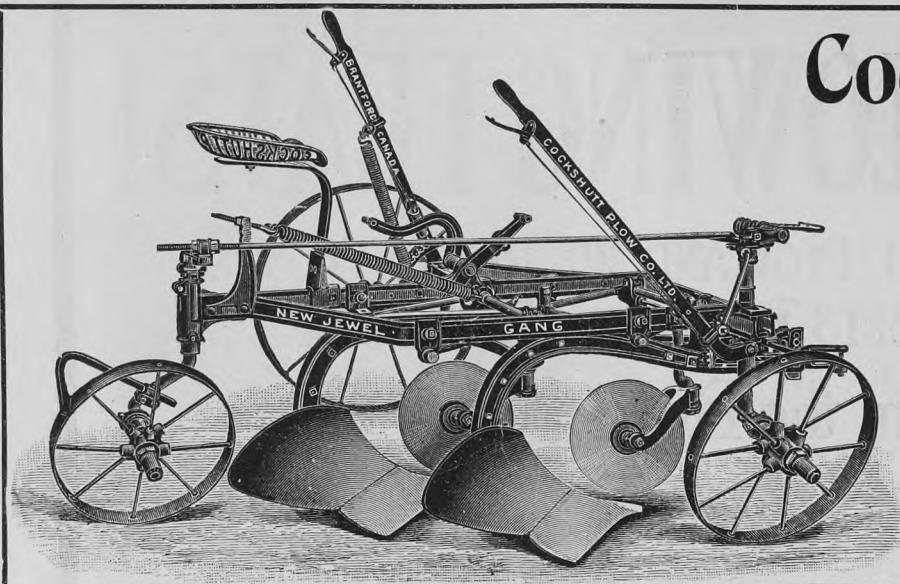
If interested in steam plowing, send for our special catalog Plowing, Grading and Hauling with a Traction Engine. It is free. It tells all about the

Reeves Flexible Frame, Steam Lift Engine Gang Plow which will Plow Anything, Anywhere

WRITE

REEVES & CO, INC., COLUMBUS, IND. U.S.A.

Canadian Branch Office: REGINA, Saskatchewan.



Cockshutt "Jewel" Gang

THE PERFECT MODERN PLOW

Foot Lift Light in Draft Easily Handled
Dust-proof Wheel-boxes Adequate Clearance
Perfect Moldboards Cleans in any Soil
Positively Unequalled in Strength and Durability

With a full knowledge of plows and plowing in Western Canada, we state unhesitatingly that none has elicited the favorable comment and given the thorough satisfaction that the "Jewel" High Lift Gang has done.

Cockshutt Plow Co., Ltd.

WINNIPEG

REGINA

CALGARY

Did Western Canada Have a Spring Time In 1907?

ONLY a short one. A cold, stormy March ushered in an April month that was anything but conducive to a good seed time with the result that seeding operations did not really commence before May 15th.

The last few days of April and the first few days of May were anxious ones for the farmer. Accustomed, for several years past, to a comparatively early spring which gave him a good harvest, the late season of 1907 was watched with a considerable degree of uneasiness—which made the mortgage appear to grow larger with every day, and the prospects for a goodly supply of golden dollars from golden wheat proportionately smaller. From May 1st to May 20th is generally regarded in Western Canada as the time for seeding but in 1907, this time will come between May 10th and June 1st.

The season itself is one of general backwardness throughout the entire country. Across the line a comparatively warm March gave way to an exceptionally cold April, with the result that all growth was retarded and much of the seed that was sown in the north and central west rotted in the ground for want of sufficient sunlight and warm weather to make it germinate. Kansas and Oklahoma—two great wheat states—were hit exceptionally hard and the wheat crop damaged from 20 to 30 per cent. Snow was reported at Leavenworth, Kansas as late as May 1st, and a sleigh ride of several hour's length was the event of the season at Aberdeen, South Dakota. The U. S. weather bulletin reporting the temperature for the week which closed April 29, shows frost in 18 states during that week. The cold and backward season, therefore seems to be a general one, and when we get right down to the facts in the case we find that Western Canada has not only fared better than most sections of the American continent

but that she is in better shape all around.

Prior to the first heavy fall of snow in 1906, there was very little frost with the result that the ground froze to a comparatively short depth. It was sufficiently deep, however, to break up the hard and compact surface texture, made so by the dry weather of last fall. When the snow went off this spring nearly all of it went into the ground, thus giving to the ground reservoir a goodly supply of moisture for the season's crop. There was a heavy fall of snow during the season of 1906-7, yet the water in the rivers were the lowest for several seasons considering the fact that the ice was so late in going out. A moderate amount of freezing coupled with the fact that a large share of the winter's snowfall went into the soil put it into fine condition for the reception of the seed just as soon as the condition of the weather permitted seeding operations.

The farmer in Western Canada has perhaps less to worry about than any other farmer in almost any other section of the country because of a late spring. Let us compare his conditions with those of the farmers of the states of the central west, say southern Iowa, southern Wisconsin and northern Illinois. Spring opens in these states, or should open about March 25, and seeding operations should be in full swing by April 5th. This for spring wheat and oats. The harvest for spring wheat begins about July 4th and oats perhaps a week later, and it matters not how late the seed is sown the harvest comes in within a few days of the same time each year. This means that the grain will ripen whether it is ready or not. The writer has seen fields of oats in Wisconsin green as could be one day and two days afterwards a sickly yellow with a certain portion crinkling down. Occasionally a hot wind sweeps over the country which fairly cooks the kernels even though

they are only in the milk. Under such conditions it is imperative that the grain be sown on time, if a full crop is to be harvested. In Western Canada the above is not true. About the only thing that will bring a crop to a premature harvest is a frost and for the past 10 years the frost line has gone farther north with each season, until now few of the older farmers take it into consideration when figuring on the prospects of a crop. From 100 to 110 days is sufficient time to ripen a crop in Western Canada, so that even if the wheat is not planted before May 25th there is still plenty of time for it to ripen before frost can catch it.

Again in the states farther south there is not the same amount of growing weather that characterizes the wheat belt of Canada.

Even under the most favorable conditions Kansas or Oklahoma cannot produce the pure No. 1 Hard of the Northwest. They have not the same ideal ripening season which makes for the hard berry of a perfect golden brown color, that has won for Western Canadian wheat a world market. The Canadian wheat crop today, while not such a factor as regards quantity as the wheat of some other sections of the American continent, is nevertheless a vital factor on the grain exchanges of the world. Let the report circulate that Western Canada has lost her 1907 wheat crop and the Bulls will rule every wheat market in the world for a time.

It is doubtless true that the late spring has curtailed the wheat acreage that would have been sown under favorable conditions, yet there is still sufficient undergrowth to produce a money maker for the farmers. We will presume that with an early spring and favorable conditions the wheat crop of 1907 would be 100,000,000 bushels, and that the net price to the farmer would be 70 cents per bushel. This would mean that 70,000,000 of dollars would come into the pockets of the farmers of Western Canada. On the other hand we will presume that the late spring will cut off 15 per cent. of the harvest crop, we

would have a yield of 85,000,000 bushels. As Western Canada is not the only section of the country affected by unfavorable weather conditions it is safe to conclude that the price of wheat will be higher than in 1907, say in the proportion of 70-85, 85,000,000 bushels at 85 cents per bushel gives to the farmers in hard cash \$72,250,000, an increase of two and a quarter millions of dollars. Added to this, from the farmer's standpoint of profit, there is less expense in handling a less number of bushels for haulage and threshing. The shortage in wheat acreage will also lead the farmers to sow a much larger quantity of oats and barley than they otherwise would. Oats is always a good market crop and barley heads the list of grains for farm feeding.

It is a noticeable fact that there is less confidence shown between the lines of the reports of the crop experts than those of several years which would tend to show that they are not exactly sure of their positions. The wheat crop of 1907 is as yet a speculation. The Bulls and Bears of the wheat pit will shout themselves hoarse while the newspapers will doubtless flash \$1.00 and \$1.25 wheat in glaring headlines. Not until the last acre is in the stack can the farmer figure on his margin of profit, but whatever happens or in whatever measure Dame Nature sees fit to deal out the "fat of the land" it is safe to predict that the farmer of Western Canada will come in for his share.

To Remove Fast Nuts.

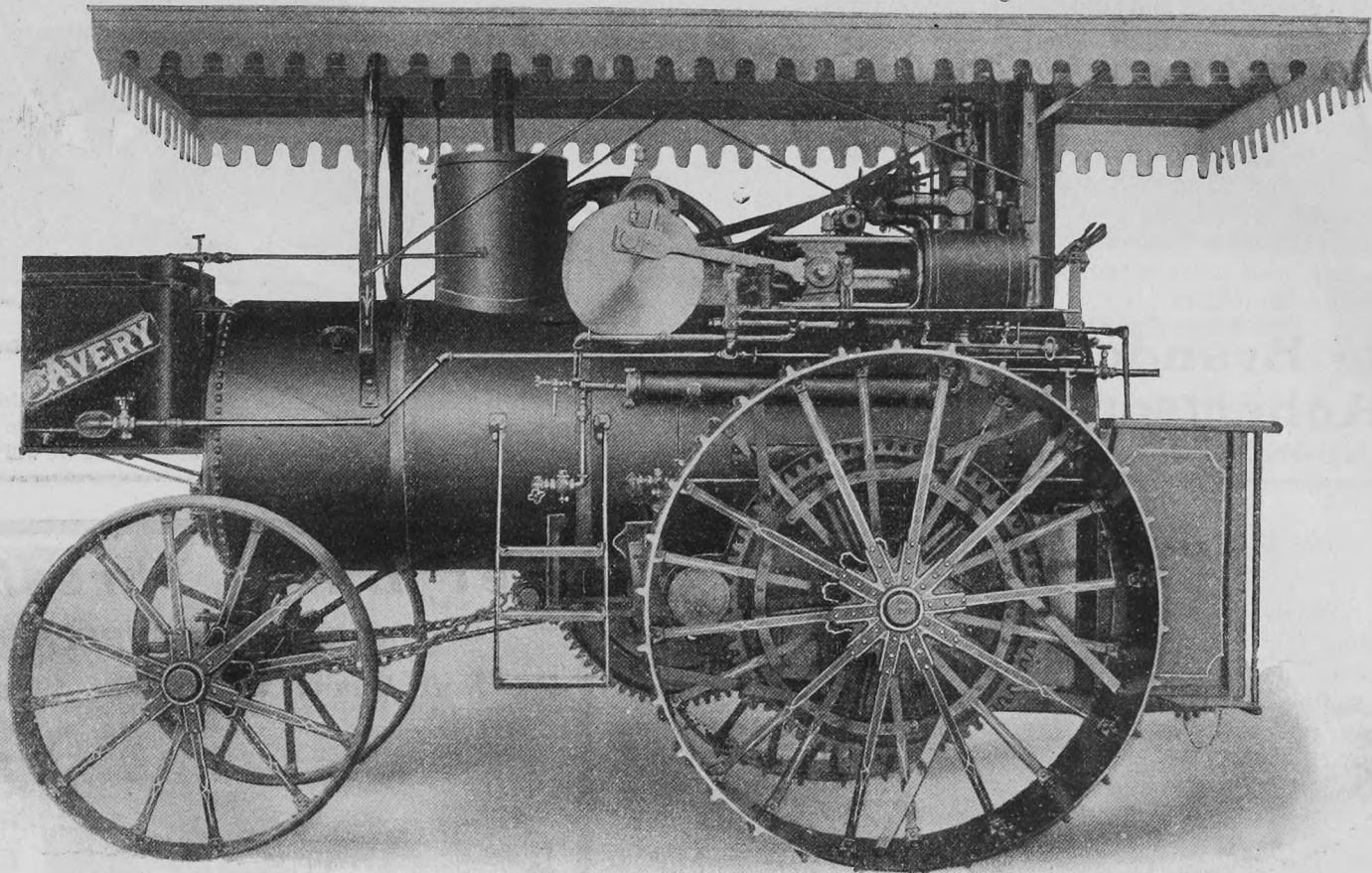
When it is found impossible to remove a nut by any other method, take a hammer, sledge and a dull cold chisel, and strike several blows, then change sides and hit some more, thus causing the nut to swell, when it can be easily removed. This will remove the nut every time, says a correspondent of the Blacksmith and Wheelwright, unless it is a very large one. It can then be removed by heating to nearly a welding heat and cooling quickly in water.

Regrets Cannot Bring Back Lost Profits

Extract from a letter received Feb. 8, 1907.

"In reply to your letter concerning my Avery separator, will say there is only one thing I have to regret and that is that I did not get one of your engines too instead of a ———. The separator is all O. K. and can't be beat.

We Say to You That Careful Investigation of the Yellow Fellow Line Before Buying Will Pay You.



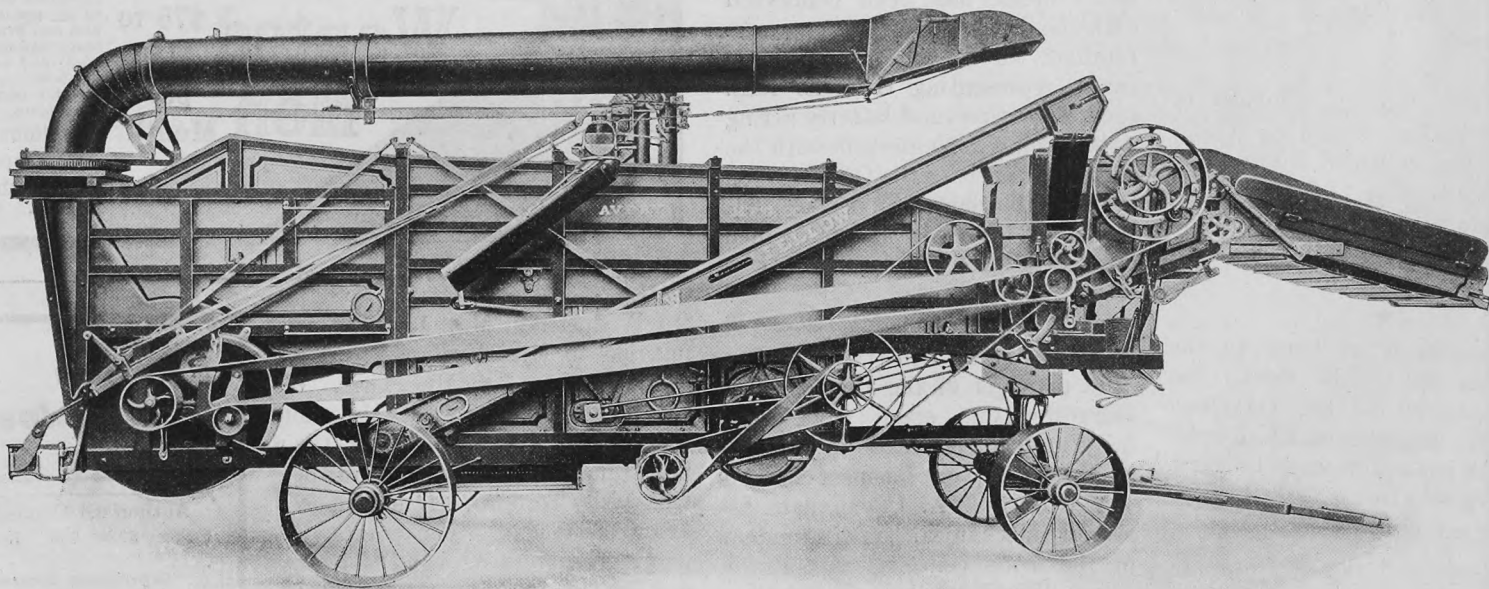
Avery Return Flue Single Cylinder Engine. Built in Sizes 16, 20, 25 and 30 H.P.

YOUR CUSTOMERS will never have any **REGRETS** about the **AMOUNT** of **FUEL** you burn, **YOUR ENGINEER** will have no **REGRETS** about the **INCONVENIENCE** of **HANDLING** and **YOU** will never have any **REGRETS** about the **LACK** of **DURABILITY** if you have an Avery Return Flue Engine. The reasons are these!

EXCEPTIONALLY ECONOMICAL. The Boiler has a full Water Front which greatly increases the heating surface and also utilizes the great heat of the burning gases in making steam instead of its being expended in burning out the boiler shell or the protecting plates.

CONVENIENT TO HANDLE. Guide Wheel and Fly Wheel are located on the same side of the engine, hence the engine is easily lined up with the separator. Throttle reverse and clutch levers, foot brake, injector, drip cocks, damper, etc., are all within easy reach of the engineer without leaving his position.

GREAT DURABILITY. Built to stand Hard Usage. The Engines that have been in the field for years are our best recommendation.



The Avery "Yellow Fellow" Separators (Built in all sizes from 28x42 to 42x70).

The Thresherman's Money Maker and the Farmer's Grain Saver.

Noted for their Jumbo Razor Steel Cylinder Teeth, the IXL Grain Saving Device, Double Belting System and Fine General Equipment in every way.

Our New 1907 Thresher Catalog, gives complete description and detailed illustrations of all parts. Write for one today.

AVERY MFG. CO., 675 IOWA STREET
PEORIA, ILL., U.S.A.

HAUG BROS. & NELLERMOE CO., LTD.
CANADIAN JOBBERS
WINNIPEG, MAN.

Elgin, Man., Nov. 29, 1906.

Brandon & Robertson Co.
Brandon, Man.

Gentlemen,—I used one of your feeders for a full season, and was perfectly satisfied with it. It did its work well and we could not notice any difference in power from hand feeding. We can heartily recommend this feeder to any person needing one.

Yours sincerely,

SPARROW & WYMAN.

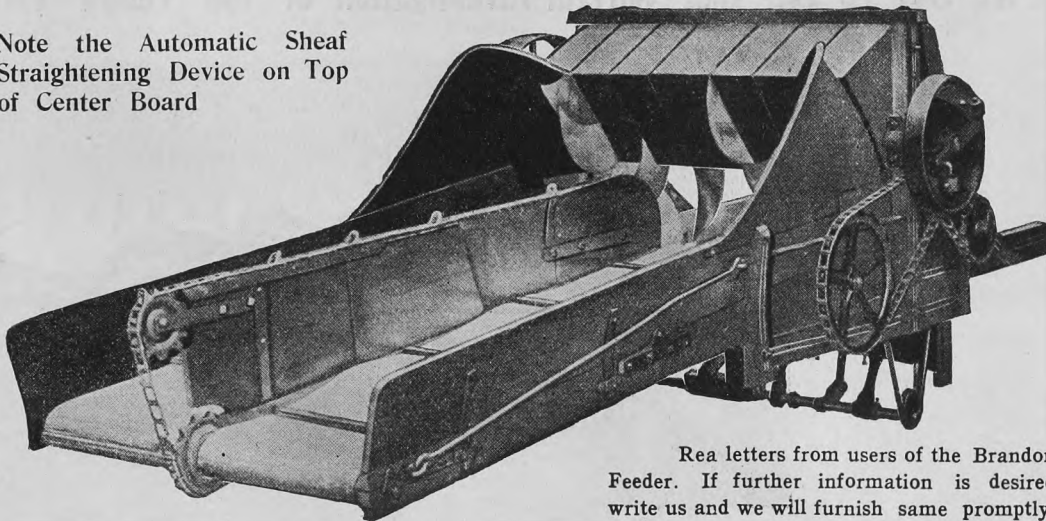
THE BRANDON FEEDER

Why it Runs so Easy.

The division board and automatic straightening device are features not found on any other feeder. By the division chain running at a higher rate of speed than the carriers it will dislodge any sheaf thrown on crosswise, with the result that all sheaves are straightened when delivered to the feeding device. The feeding device having a reciprocating motion automatically does the retarding from the bottom of the sheaf, thereby doing away with a lot of unnecessary machinery found in other feeders.

Note the Automatic Sheaf Straightening Device on Top of Center Board

The Brandon & Robertson Mfg. Co.,
BRANDON, MAN. LIMITED.



Rea letters from users of the Brandon Feeder. If further information is desired write us and we will furnish same promptly.

Personal Gleanings

Mr. J. J. Bugee, manager Canadian Moline Plow Co., has just returned from an extended visit East and South. Mr. Bugee spent some time at the factory at Moline as well as visiting some of the Ontario agencies of the Company.

Mr. G. K. Wedlake, mechanical expert for the Cockshutt Plow Co., of Brantford, is at present in the West where he will remain for some time carrying on experiments with the famous Cockshutt Plows.

Mr. E. S. Tecktonious, manager Western branch Nichols & Shepard Co., has just returned from a trip to Regina and other Western points.

Mr. J. H. Harrison, of the Hart Grain Weigher Co., of Peoria, spent some time in the city recently in the interests of his firm. Mr. Harrison is introducing a wagon box scales—a new, novel and practical invention, into Canadian territory. The scales are manufactured by the Hart Grain Weigher Co.

Mr. E. L. Macvicar, of the E. L. Macvicar Co., of Indian Head, spent some time in the city recently. Mr. Macvicar will be remembered by the trade as the genial manager for J. I. Case T. M. Co., at Winnipeg.

Mr. J. G. Pulford, of Thessalon, Ontario, was in the city recently. Mr. Pulford has been connected with the Massey-Harris Company, Limited, for a great number of years, representing them as local agent for a time, and latterly acting as blockman in connection with the Ontario branch of the Company on the North Shore Division. His Winnipeg friends were much pleased to have this opportunity of seeing him again.

Mr. A. G. Watson, manager of the John Watson Mfg. Co., Winnipeg, has just returned from a trip to the head office and factory at Ayr, Ontario. Mr. Watson also visited several points in the South on his return trip.

Information is at hand to the effect that Mr. J. E. Bevan has been appointed to the travelling staff of W. Johnston & Co. for Alberta with headquarters at Calgary. Mr. Bevan was formerly a Massey-Harris agent at Stonewall, Man.

The famous Fish Bros. Wagon manufacture at Racine, Wis., will in the future be handled by the Tudhope-Anderson Co., of Winnipeg, Calgary and Regina. In connection with this business Senator O. W. Johnson, president of the Fish Bros. Wagon Co., spent some time in the city recently. Senator Johnson was on his way from a trip to the Pacific Coast.

Mr. A. E. McKinstry, Canadian sales manager of the International Harvester Co., spent some time in Winnipeg recently as well as in the West, on business for his firm. Mr. W. A. Cavanaugh, assistant mechanical superintendent of the same concern, was also a recent Winnipeg visitor. Mr. Cavanaugh is an old timer in Canadian implement circles, having charge of part of the international business in Canada West before the amalgamation.

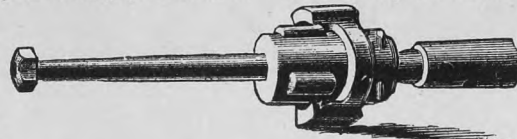
One of the latest benedicts in implement circles is Mr. John H. Turnbull, assistant manager for Sawyer & Massey Co., of Winnipeg.

Get Busy Threshermen!

ORDER YOUR SUPPLIES NOW

We Sell Direct at Lowest Wholesale Prices

Don't buy supplies of any kind until after you get our PRICES and TERMS. Save 50% in cost of your supplies. The Best Goods at about half what you must pay elsewhere. Write to-day for our most liberal offer.



Roller Expanders

The Best Made—2 inch, \$3.50; 2½ inch \$4.50.

Cut Lacing, 80 cents per pound. Sides, 75 cents per pound. Order early.

WINGOLD STOVE CO., LTD.

245 Notre Dame Ave.

WINNIPEG



Wanted Men \$75 to \$150 per Month

Hundreds of men wanted to fill positions as Firemen and Brakemen. We teach and qualify you by mail—and assist in securing positions. Write to-day for booklet and full particulars.

Dominion Railway Correspondence School
Dept. A WINNIPEG

On Wednesday, May 15th, he was married to Miss Evelyn May Gibson, daughter of Mr. Thos. W. Gibson, of Winnipeg. Mr. and Mrs. Turnbull are spending their honeymoon in the East where they will visit Toronto, Hamilton, Niagara Falls and other points. A long, prosperous life and a happy one is the wish of the Canadian Thresherman and Farmer.

Add some linseed meal and wheat middlings to the ration during the season, when the horses are shedding.

THE detachable boiler flue is a good thing if you are in the market for such a thing. Investigate and satisfy yourself.

Eastern Townships Bank HEAD OFFICE SHERBROOKE Prov. Quebec

Authorized Capital \$3,000,000
Paid-up \$2,500,000 Reserve \$1,300,000

Winnipeg Branch
369 MAIN STREET,
W. L. BALL, Manager



GOOD ENOUGH SULKY PLOW

"The Best Plow on Earth for the Money." 30,000 Farmers bought them last season. Different sizes and styles of bottoms can be worked on same plow. Ask your dealer.

MOLINE PLOW CO., Moline, Ill.

Send 4 cents in stamps for Flying Dutchman Song Book.

SOME TIGER STRIPES

Every One a Reason Why You Should Run a Gaar-Scott "Tiger" Thresher



No. 1. Unbreakable steel axles and steel wheels.

No. 2. "No-Shake, No-Sag" Frame, trussed and braced inside and out—the strongest and best supported frame made.

No. 3. Timbers are well seasoned hardwood, selected with reference to the peculiarities of different climates, joints well mortised and leaded (not dipped) and strongly bolted.

No. 4. Our method of setting, and leveling the cylinder is done instantly, gives rigidity to every part and saves wear and tear.

No. 5. The concave adjuster gives the easiest, quickest and most perfect adjustment of concaves to cylinder.

No. 6. The end-shake chaffer and the side-shake shoe and cleaning riddle are special features found only in the "Tiger" Thresher. They give the most perfect cleaning and assure the least waste of any thresher made.

No. 7. There are two bearings on the driving end of the cylinder shaft, so that the shaft runs smooth and cool without strain or binding.

No. 8. The entire construction is so simple and all parts so light running that only three belts are required. (Some threshers have 5 to 10 belts.)

No. 9. It has large straw space above the racks and the straw moves freely without bunching or carrying out grain.

No. 10. The weight of the main drive belt is carried low on the center of the front axle, so that the frame is not racked by the dragging weight of belt at side.

No. 11. The Gaar-Scott belt guide is a belt saver, does not wear, fray or turn up the edges of the belt, and requires no adjusting.

These are some of the "body stripes." The "head and tail stripes," (Feeder and Stacker) are just as fine. We will tell you about them in a future issue of this paper, or will be glad to send you our free catalogue at once, so you can have all the "Tiger's Stripes" before you.

No. 12. Every part of the thresher is in perfect line and there are no hot boxes or journals to contend with; nothing on which straw can wrap, and no forks or pickers to give trouble. It threshes, cleans and saves every variety of wheat, oats, rye, barley, buckwheat, speltz, timothy and alfalfa.

No. 13. It will out-thresh any machine made, and fast work does not affect its close saving and perfect cleaning.

No. 14. On account of its extreme simplicity and great durability, it does not waste profits by delays or cost of repairs. We can refer to some Gaar-Scott machines that have threshed every season for twenty years.

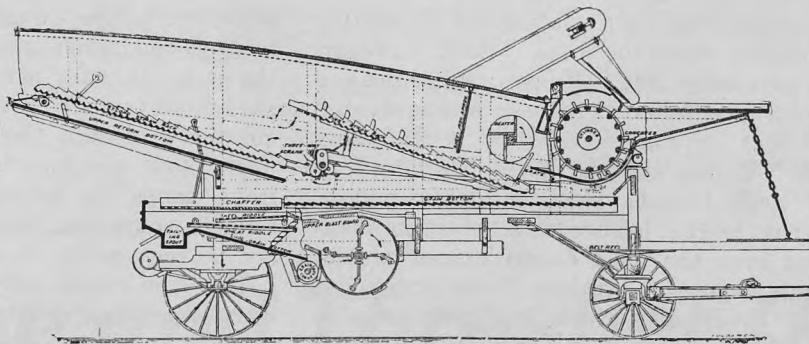
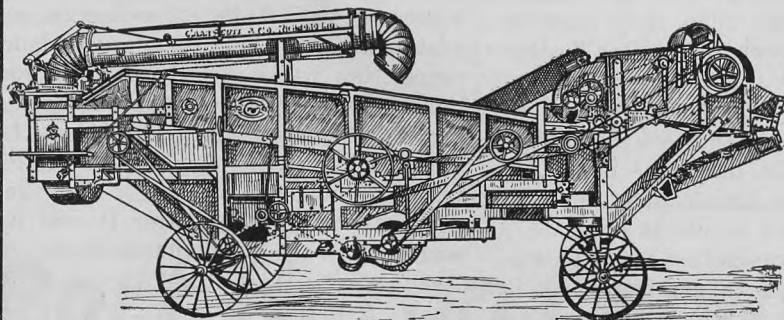
No. 15. The principle of separation from cylinder to weigher is the most perfect ever devised. The up-hill circular motion of the straw racks does the work, and the grain goes in the sack instead of the straw stack.

No. 16. The Three-Way-Crank mechanism is so perfectly balanced that it has no dead center, and gives the lightest and quietest separating motion you ever saw. It requires no adjusting and gives twice the throw of eccentric devices.

No. 17. Our patent Reversible "Tiger" Teeth have the right size, weight and shape for all threshable grains and seeds. The spring-lock washers prevent their getting loose, and they can't turn in the bars and don't break. Reversing gives the equivalent of a new set of teeth.

No. 18. The cylinder has 16 double bars with large outside pulleys that give steady, strong power to all rear parts of the machine. This 30-inch cylinder will not slug, knocks all the grain out of the heads, and about 90 per cent. of it is separated on the long stretch of grates before reaching the racks.

No. 19. It is the result of 70 years honest effort toward perfection; makes money for the thresherman, saves money for the farmer, and pleases the miller and grain buyer.



THE TIGER THRESHER OUTSIDE AND INSIDE. LOOK FOR THE STRIPES.

PURELY AGRICULTURAL.

SUBSCRIPTION RATES.

Postage prepaid, Canada and Great Britain - - - \$ 50

Postage prepaid, U.S. and other Foreign Countries - - 1 50

Advertising rates furnished on application.

CORRESPONDENCE SOLICITED

From Farmers, Threshermen, Machine Agents, and others, on matters pertaining to the subjects dealt with in this Journal.

ADVERTISING COPY.

Advertisers' copy should reach us early in the month preceding the date of issue—certainly not later than the 10th.



A Magazine of Farming and Farm Machinery.

Published monthly by E. H. Heath Co., Ltd., at the Union Bank Building, Winnipeg, Canada.

E. H. HEATH - - - President and Manager

E. W. HAMILTON - - - Editor

Members Western Canada Press Association.

JUNE, 1907.

NON PARTISAN.

Failing to receive paper you should notify the office at once when mistakes, if any, will be corrected immediately.

OUR GUARANTEE.—No advertisement is allowed in our columns until we are satisfied that the advertiser is absolutely reliable, and that any subscriber can safely do business with him. This puts us in a position to positively guarantee the reliability of each and every advertiser in the magazine. If any subscriber is defrauded, E. H. Heath Co., Ltd., will make good the loss resulting therefrom, if the event takes place within thirty days of date advertisement appeared, and complaint be made to us in writing with proofs, not later than ten days after its occurring, and provided, also, the subscriber in writing to the advertiser stated that his advertisement was seen in THE CANADIAN THRESHERMAN AND FARMER. If you act in good faith and be defrauded through an advertisement in this issue, we will make it right to you on the above stated terms. Be careful when writing an advertiser to say that you saw the advertisement in THE CANADIAN THRESHERMAN AND FARMER.

With wheat at 85 or 90 cents per bushel the farmer should not hesitate to pay a reasonable sum for threshing and not ask for a cut in price.

The report of wheat expert Jones, of Minneapolis, excited very little comment this year. Verily every man has his time, place and reward.

The matter of hail insurance is one which every farmer should seriously consider. The annual premium is a small matter in itself but it guarantees a farmer's crop against one of the most destructive elements. To be hailed out when the crop is insured is bad enough but if no insurance is carried, it puts many a farmer out of business.

The large amount of publicity recently given to Western Canada, through the American magazines will certainly bring about results. What is more to the point the half was not told for the articles were if anything underdrawn. Let the American farmer and the American capitalist come in. We need both the brain and the money in the development of Canada West.

THE PRICE OF WHEAT. \$1.00 wheat has been almost a reality in the grain markets of Western Canada during the month just passed. Coming as it did during and as a direct result of a backward spring, it tended to make the farmers feel that what Nature failed to do, the demand for wheat with a diminished supply in sight was going to make up for.

The rise in the price of wheat in 1907 was perhaps the most gradual and healthy in the history of the wheat market for some time. We have had higher prices but they have generally been the result of some advantage which the Bulls have secured over the Bears with the result that just as soon as the excitement of the market wore away the price of wheat went down with a crash and the market lay panting and helpless from the shock. Such however, is not the case in 1907. Kansas, Oklahoma and Nebraska are failures. Russia's wheat crop is damaged. Spring is backward in Minnesota and the Dakotas, and the prospects during May in Western Canada were decidedly bullish. The wheat market is always an uncertain quantity and even the most expert cannot predict with any degree of certainty future prices, but natural conditions—which are most reliable things—all point to a higher price for wheat in 1907 than in 1906. The close of the season will bear out the truth or falsity of this statement.

There is still a considerable amount of the 1906 wheat crop in the granaries and elevators. The winter blockade and car shortage coupled with the late opening of navigation

on the lakes made it impossible for many farmers to market their wheat, and these same farmers will now come in for their share of the raise in wheat prices which will in a great many cases more than compensate for the late spring.

The great problem is when to sell on a rising market. Shall the farmer sell when wheat is at a good price or wait for 90 cents or a dollar? Always remember that the wheat market is a very uncertain thing and that if you wait for a loss you have no one to blame but yourself.

IS THE USE OF FARM MACHINERY PROFITABLE?

Every spring sees thousands of dollars worth of farm machinery sold to the farmers of Canada

for use upon their farms.

It is a fundamental rule of economics that every investment should represent an income, and such being the case it is only fair to bring up the question as to just what is the income from the farmer's investment in farm machinery.

It is a complex matter owing to the fact that no two farmers handle their machinery in the same way either as regards use or care. One farmer buys just the sort of machinery he needs, houses it carefully, works it properly and consequently realizes a handsome profit on the investment. Another farmer buys carelessly, leaves his machinery exposed and unrepaid, and he of course suffers a loss. Farm machinery is to-day a most necessary thing, but unless it is used properly it will become the greatest source of farm leakage instead of a source of profit as originally intended.

BUILD FOR THE FUTURE.

Seeding over, municipalities and municipal offices all over the country will in a short time be in the midst of road and bridge building and repairing. The present is therefore a convenient time to call their attention to the necessity of building stronger bridges and wider grades than they have in the past. In many parts of the country bridges are known to be so weak that it is very dangerous for a modern threshing outfit to venture upon them, and in order to protect themselves from claims for possible damages, municipal councils sometimes issue notices that they will not be responsible should accidents occur.

This is of course discriminating against owners of threshing outfits in a manner which is decidedly unjust. The threshing outfit is an absolutely necessary agricultural machine, and every facility should be afforded by the custodians of the public roads for their safe and rapid transit from one place to another. It therefore follows that old bridges should be strengthened where they require it, and new ones built with a due regard to the increased

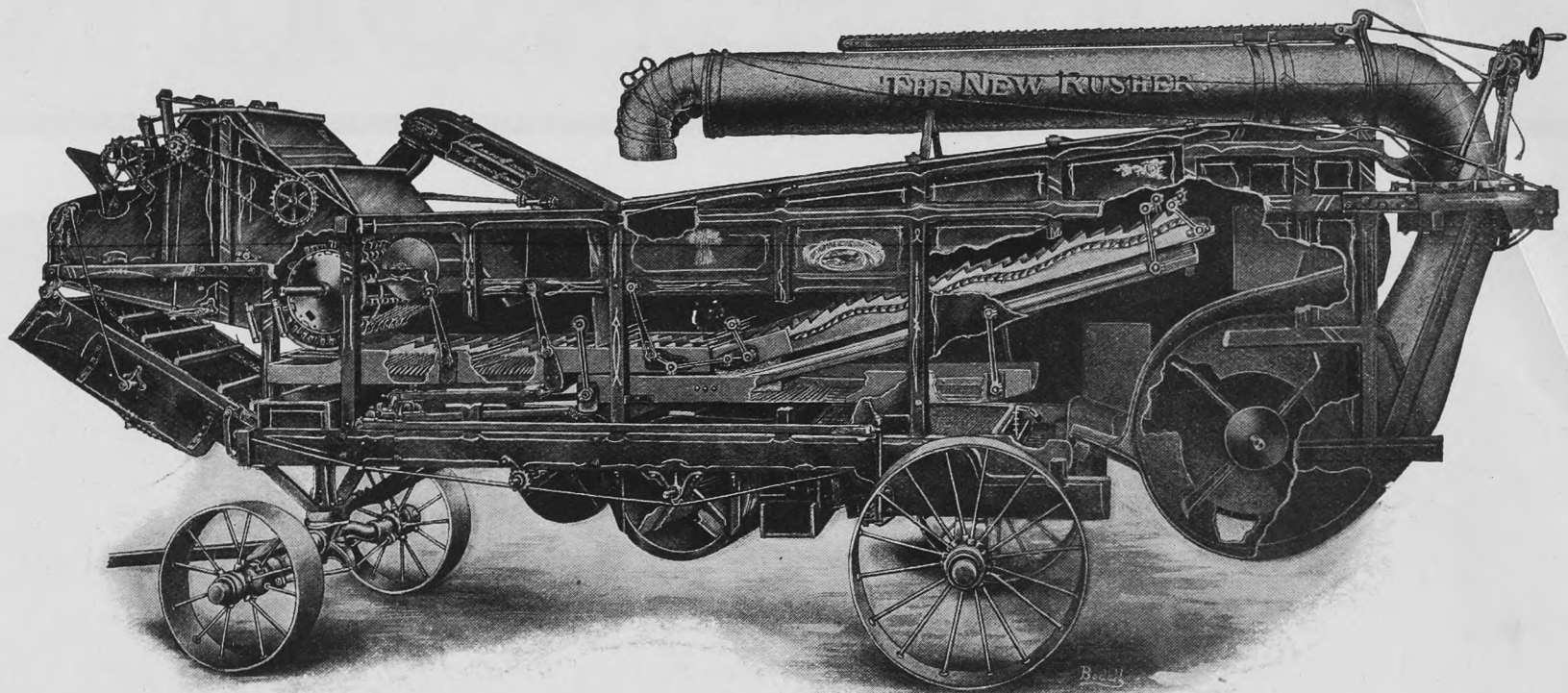
size and weight of the present-day engines and separators. Engines have been increased enormously in size and weight during the past few years. A thirty horse power engine is now a very common thing and 32 and 40 horse power engines are found in nearly every locality. These latter weigh from 15 to 20 tons when empty and are an enormous weight to take over anything but a safe bridge. Not only in engines but in all other parts of the threshing outfit has a great revolution been taking place. Separators weighing as much as the old style machines, with their big cylinders and self-feeders, wind stackers and grain weighers, run the weight up to total what it used to be ten or fifteen years ago. The engines have to be built heavier and bigger to move and operate these great grain savers, without which the present increasing wheat crop of Canada West could not be garnered. We do not quite see that a notice on a bridge that passage over it of a heavy load will be at the risk of the owner of the land, relieve the public of responsibility. Every one has an equal right to draw heavy loads even over bridges, and those who are intrusted with road and bridge building should recognize this fact and build accordingly.

In writing these lines it is not our desire to stir up a strife between municipalities and threshermen. Our object is to impress upon all concerned that everything is advancing in this country and road and bridge builders should be prepared to fall into line. The class of roads and bridges that would do ten or twelve years ago will not do to-day, and to build anything that is not up-to-date and equal to the strain to be put upon it by the demands of the present day, is not only a mistake, but if continued in face of repeated warning may become a criminal one. There is no industry in the world that has made and is making greater headway than that of the threshermen. Neither is there an industry that has had more to contend with in order to secure the use of the highways. Politicians have in the past legislated against the threshermen under the mistaken idea that they were helping the farmer, but we believe the day has come when the farmers are prepared to stand by the threshing industry and see that it gets fair play. Farming and threshing must go hand in hand, and the sooner this fact is fully recognized and acted upon the better it will be for all concerned in the development of the country.

Problem—What is the difference between the farmer who puts his feet in the half bushel, the thresherman who cuts prices and the manufacturer who sends in copy for a quarter page ad. and a page gratis reader?

We haven't got any green bug scare anyway.

IT SAVES THE GRAIN



THE 1907 PORT HURON RUSHER SEPARATOR IS A GREAT GRAIN SAVER.

Full descriptions given in our Separator Book tell why the Port Huron saves the grain.

There is not room here for telling one half of the reasons why the Port Huron saves the grain.

We give herewith short extracts from letters from many of our customers proving that the 1906 Port Huron Rusher did save the grain. This is not **theory** but **fact**; write to any of these men and find out what their experience has been.

Then write for our printed matter. You will see from it that the Port Huron Rusher has so much separation space, and this separation space is so thoroughly filled with the simplest and best devices for separating the grain, that the Rusher just **can't help saving** the grain.

It has simply **got** to do it, no help for it.

I think I saved on my crop \$1,000 by having this rig.—BERNARD HARDEBECK, Canby, Minn.

The farmers say they cannot find a kernel in the straw stack.—S. W. TRAUGER, Plymouth, O.

It is the best cleaner and separator I ever saw.—JOHN A. SCHUETZ, Sac City, Ia.

The Port Huron is a grain saver, and a clean thresher. It saves the farmer his thresh bill.—JOSEPH M. WENZEL, Hillsdale, S. D.

I don't think there was enough grain went through the machine to feed a chicken.—W. H. WARNER, Menahga, Minn.

Will separate better than any other machine.—PETER TELLIER, Humboldt, Iowa.

In 1904 we bought a complete ———— rig. Farmers were kicking because half of grain going in stack. To remedy it, we bought a new Port Huron and all farmers are pleased.—DERY & DERY, Montpelier, N. Dak.

It saved all the grain where I have ever threshed.—A. A. MINKLER, Mendota, Ill.

As for saving the grain it cannot be beat.—WILLIS COOPER, Dennison, Ill.

For fast threshing, cleaning and saving grain, I will put it up against any machine in my territory.—D. MILLER, West Branch, Mich.

The best grain saver I ever saw.—H. V. CLENDENNING, Harding, Man.

Saves the oats better than any of them.—H. B. BOWMAN, Broadlands, Ill.

With the poor crop that we had last fall, wheat making from four to eight bushels per acre, and oats from eight to ten bushels per acre, it saved it and cleaned it.—ANDREW KRECKLOW, Manley, Ia.

We have run one day and threshed 1,318 bushels, and there has not been one kernel of grain seen going in the straw stack, and it is watched very close.—D. H. DRISCOL, Culbertson, Nebr.

The separator is fine in saving grain.—D. D. COX, Milford, Nebr.

Separator cannot be beat for saving grain of all kinds.—H. C. JONES, Myrtle, Man.

The best saver that I have had to do with.—D. M. GARRISON, Wolford, N. D.

Mr. I. Triesen said after his threshing was done that the Port Huron did the best of the 11 kinds of threshers he had threshed with, that is, in clean threshing and saving and cleaning the grain, both in damp and dry condition.—A. J. TOWES, Plum Coulee, Man.

I cannot say too much in regard to its merits as to the wasting of grain. Out of the ten machines that have threshed on my place I can safely say that this is the only one that has not wasted my grain.—CYPRIEN ST. CYR, Wolseley, Sask.

It will save about 99½ per cent. of the grain.—R. GAINSFORTH, Spiritwood, N. D.

Port Huron Engine and Thresher Co.

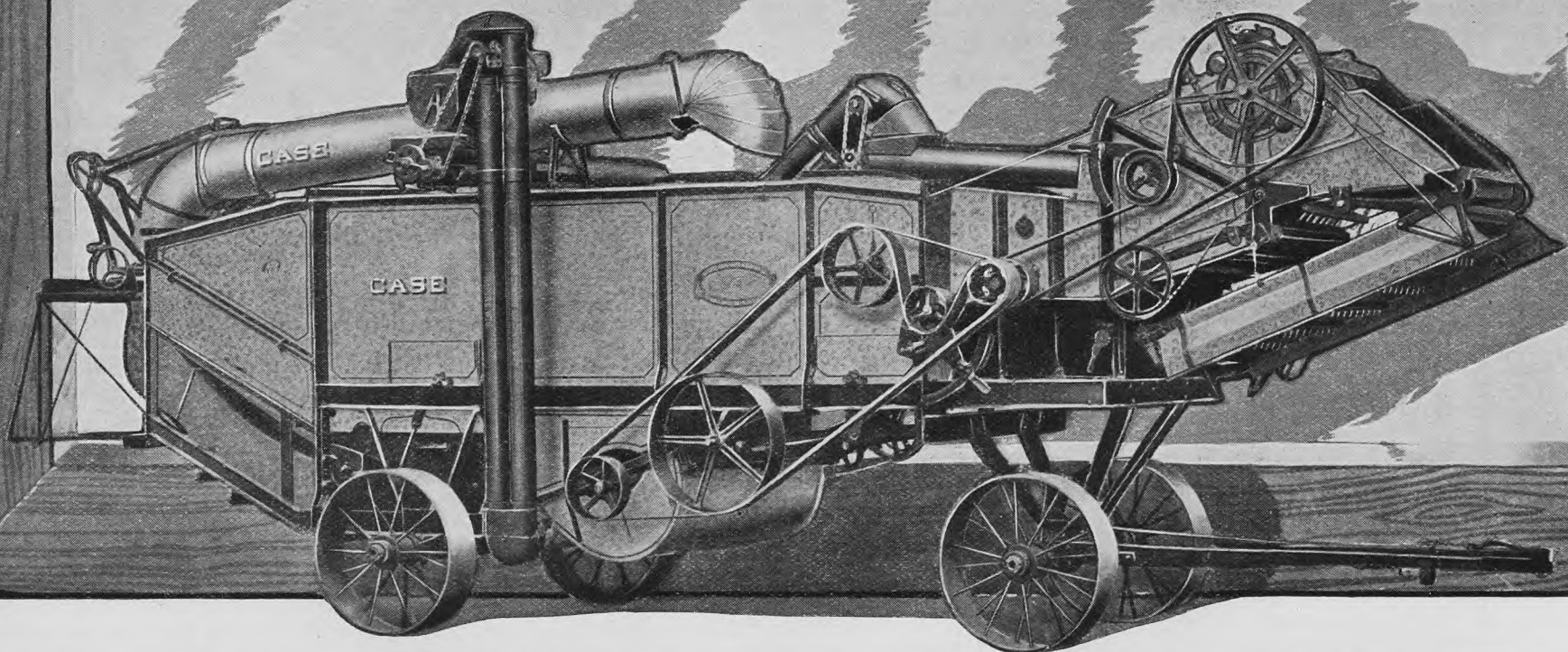
CANADIAN PORT HURON CO., Ltd., Winnipeg, Man.

THE CHAPIN CO., LTD., CALGARY, ALTA.

A PLEASING

The reflection of the "CASE OUTFIT" at the end of the season never disappoints its owner.

Threshermen who have placed their dependence in Case goods were ever well rewarded with all the good that High Grade Threshing Machinery can bring.

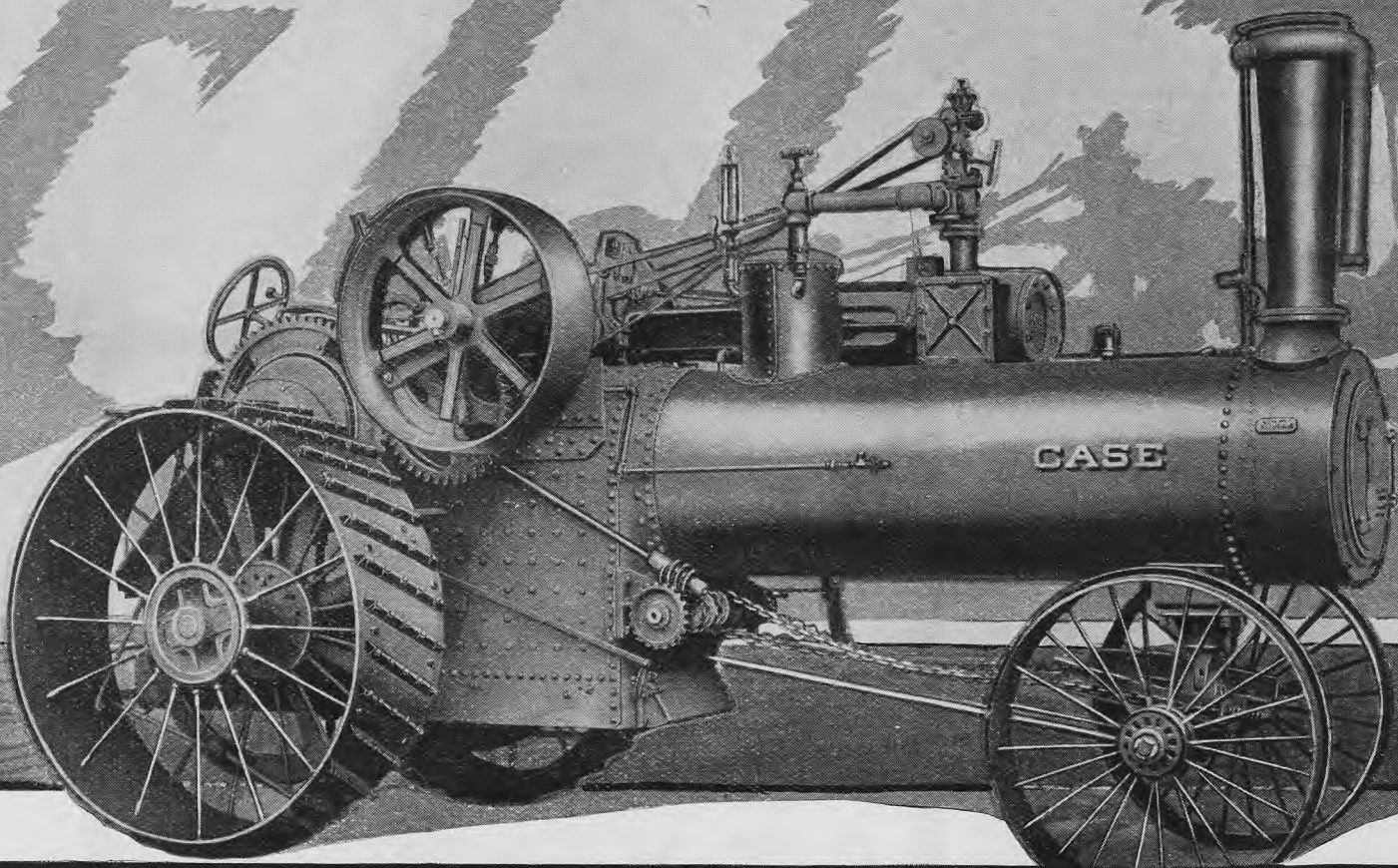


J.I.CASE THRESHING RACINE,

TORONTO, WINNIPEG, REGINA

REFLECTION

*Get onto the bright side in
threshing life by making arrange-
ments for that "CASE OUTFIT" now.*



MACHINE COMPANY
WIS., U. S. A.

The Farm Machinery Expert and What is Expected of Him

By E.F.W.

THERE is perhaps no other man or class of men that is so generally needed or so universally cussed as the farm machinery expert. He has a hard row to hoe. Generally he comes up from the ranks, secures his position because of the fact that he possesses some little mechanical ability and is sent out on the road to make good.

In the majority of cases the root of the trouble that the expert is supposed to settle lies with the farmer himself rather than with the machine. In all my experience as expert I have found that the first thing for a man to do when called upon to fix a machine is to commence at the head of the machine and in nine cases out of ten it will be found that it is the owner that needs fixing.

I remember one time of being called upon to go a distance of some fifty miles to fix a self-feeder that was balking. The owner of the rig had called up the office over the long distance and had informed them that unless something was done immediately they would find their feeder in the fence corner. It was the company's first machine in that particular neighborhood and they were very anxious to have it give satisfaction.

I took the first train out and arrived at the nearest station about 4 p. m. I secured a livery to drive me out to the owner's home but before we got started a very heavy rain storm came up. It rained steadily for about an hour with no signs of letting up so I went to the local telephone office and called up the thresherman in question. He informed me that the feeder would not take straw at all or at least in anything like the separator's capacity. I questioned him regarding it and from his replies discovered what I believed to be the trouble. I told him to look in the morning and see if a certain bolt were not loose which allowed a portion of the shaker to drop and so shut off the grain entrance. At 6.30 a. m. on the following morning I was awakened by the hotel clerk who told me that I was wanted at the telephone. Hurrying down stairs I found that my troubled thresherman had made an investigation and had discovered the difficulty with the balky feeder. Had he examined it carefully before he took the trouble to drive several miles to town to use the long distance phone he would have been several dollars ahead and so would the company.

Another case worthy of note occurred when I was experting for a certain harvester company. A call came for help from a farmer residing in a distant town. It was a very urgent case, and I was dispatched immediately to locate the trouble. Forty or fifty miles by train and 6

or 7 by team brought me to the scene of action where I found a very indignant farmer. He was attempting to cut a piece of over ripe wheat but the machine was working on the hit and miss plan—tying two and missing three. It was a bad mess and it took nearly all of the time of his two hired men to tie up the loose sheaves. I followed him part way down one side, stepped behind the machine, gave the tension a few turns and it never missed a bundle while I stayed in the field which was an hour or more. A minute's work did the trick, yet it cost the company about \$15.00 to straighten the matter out. Occasionally, of course, the expert is called to a job that only an expert and a good one can fix. This is where the so called expert is up against it and generally fails to make good.

He tinkers with the machine, not knowing just what is wrong and generally kills more time and makes the machine worse than it was before. A poor expert is much worse than none at all as he will cost his company a great deal of money and give very little value in return.

The farm machinery expert should be a man with considerable tact as well as mechanical ability. He is obliged to cover up all sorts of things left by dealer and salesman and unless he possesses some diplomacy and business ability he will many times be unable to make a sale hold that has already been put through by the dealer or traveller. I remember one instance where an expert was sent out to set up a harvesting machine. The man who purchased it was a middle aged farmer who lived on a small rented farm and who purchased the machine with the idea of doing some custom work as well as his own. The only property that he owned was a fine team of horses and upon these he agreed to give a chattel mortgage as security for the payment of the machine. The mortgage was drawn up and signed by the farmer when he gave his order, but there still remained the signature of the farmer's wife to be gotten at the time the machine was set up. The expert arrived in due time, set up the machine, got it working properly and then produced the mortgage for the signature of the farmer's wife. The husband went in search of a pen and ink and the expert took his time to extol the advantage of a mortgage in getting rid of property at the same time throwing in several cases by way of illustration. It suddenly dawned upon the wife that their favorite team of horses were in danger and when the farmer came back with pen and ink she stubbornly and tearfully refused to sign her name.

CONFIDENCE IN YOUR BOOKKEEPER

You have invested a lot of money in your threshing outfit, and depend on your weigher to keep account of the work your outfit and hands do each day. If your bookkeeper is not competent you will certainly lose money, and the confidence of your customers.

HARTLEY WEIGHER

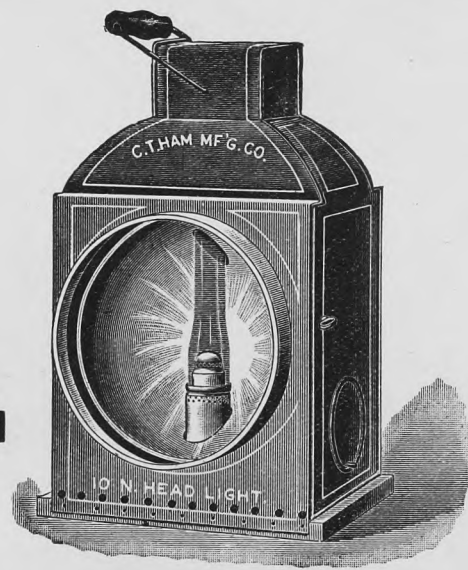
Is the only one on the market that has a scale absolutely weighing and registering every bit of grain threshed—a reliable and honest bookkeeper—makes you money and satisfies your customers. No trouble settling, when you have a **Hartley Outfit**.

A large stock of Hartley Outfits and extras in stock at Winnipeg.

THE 20th CENTURY MACHINE

Write for catalog.

C. J. HARTLEY COMPANY
DECATUR, ILLINOIS.



HAM'S HEADLIGHT IS RELIABLE

Every thresherman should have a headlight, one that he can depend on to serve him under all conditions. Ham's Headlight gives a bright steady light, it does not smoke, it will not blow or jar out and is guaranteed to give perfect satisfaction. Buy Ham's and be satisfied. Write for booklet. Address Dept. "H."

C. T. Ham Mfg. Co.
ROCHESTER, N. Y., U. S. A.

Reasons Why the Parsons Feeder

HEADS THE LIST

It has the only Correct Combination and Mechanism for Feeding

Knives always sharp.

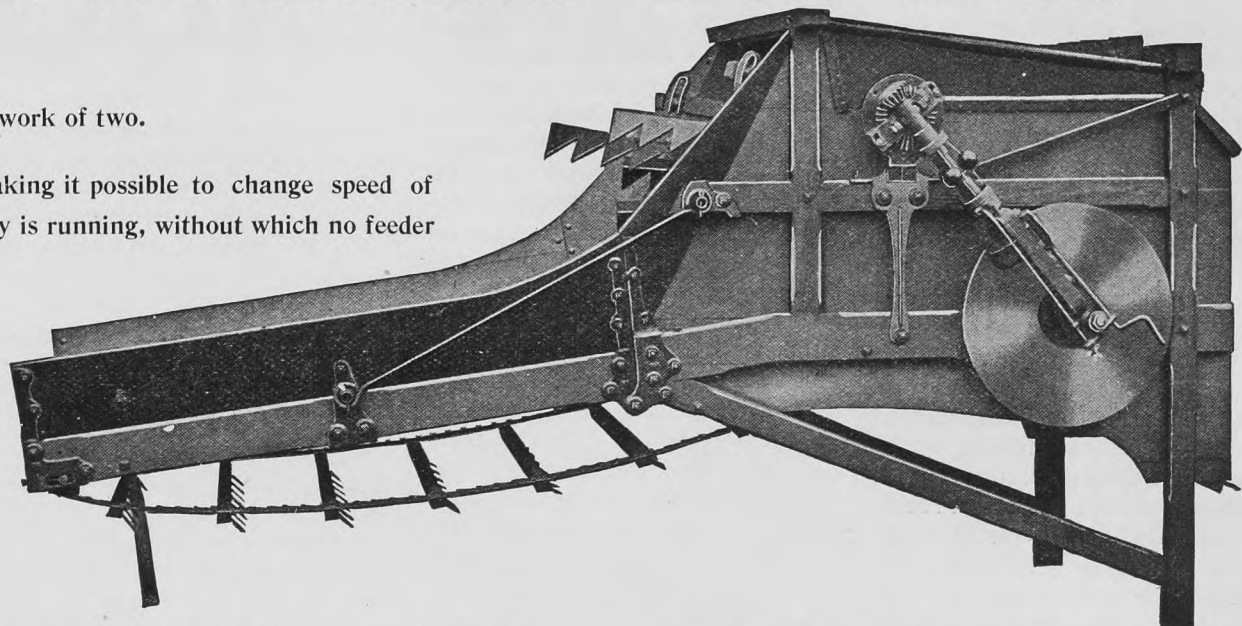
An engine governor that does the work of two.

A strong variable friction drive making it possible to change speed of rake and feed while machinery is running, without which no feeder can be a success.

Impossible to feed until cylinder has attained threshing speed.

Stops feeding in time for machine to clear itself.

Adjustable in all working parts.



PARSONS BAND CUTTER AND SELF FEEDER CO.

Newton, Iowa, U. S. A.

PARSONS HAWKEYE MFG. CO., Sales Agents
WINNIPEG, MAN.

No amount of persuasion or explanation could induce her to sign and the expert was obliged to go home with a worthless mortgage in his pocket. It took the dealer and the salesman nearly a day to again execute the order properly.

The expert should be a man who knows his business. He should know every bolt, cam, nut and screw of the machine he is supposed to fix. He should not talk too much. In fact the less he says the better, for it is only what he does that counts. He should be cool headed and careful if he wishes to succeed and if he does not know what to do admit it. He is a necessary adjunct to the implement fraternity providing he knows his business but if not he is useless.

On the other hand it is folly for the farmer and machine owner to call in an expert every time something goes wrong. It is an admission of weakness on his part. There are two things that the farmer should always remember in connection with machinery trouble.

First: There is always a cause for the trouble which cause should be located at once. Second: One should know the effect of the remedy which he applies and apply it at once. If the above two rules are adhered to the number of farm machinery experts will rapidly decrease and the farm machine will become more nearly perfect in the estimation of the users than it now is.

Boiler Scales and Compounds.

Max D. Slimmer, M.A., Ph.D., in a recent copy of Popular Mechanics, has the following to say regarding boiler scale and boiler compound.

Boiler scale is, undoubtedly, a source of great danger as well as loss of power. It is said that one-sixteenth of an inch of scale on the tubes of a boiler necessitates an increase of fifteen per cent. in the fuel used; one-fourth of an inch increases the amount of fuel needed sixty per cent. Boiler tubes covered with a thick coating of scale often become red hot, and are, in this way, weakened. It sometimes happens that, on account of uneven heating, portions of scale are detached from red hot tubes which then break upon coming in contact with the cold water in the boiler.

Corrosion of boiler plates is due to air or acids present in the water. Pure water is without effect upon iron. Corrosion due to acid waters is particularly common in regions containing coal deposits. Mine waters generally contain some free sulphuric acid.

There is no doubt in the minds of all engineers that something must be done to remedy the evils of scale formation. The most common method consists in allowing the scale to form until it has attained a thickness sufficient to seriously affect the efficiency of the boiler, and then removing the same by

mechanical means. The objection to this method is that it necessitates putting the boiler out of service and the removal of the scale by mechanical means often results in serious injury to the tubes of the boiler.

"Boiler compounds" are chemical substances which when put into the boiler produce changes in the water so that only soft, muddy scale and soluble salts are formed. They can be very highly recommended in most cases, as they undoubtedly are of great value when properly used, adding both to the life and to the efficiency of the boiler. Mr. A. A. Casy, in an article on Corrosion and Scale from Feed Waters in The Engineering Magazine of 1897, says of boiler compounds: "Never use a boiler compound unless you know positively what it is composed of, and how it will affect the impurities in your boiler and the boiler itself. In the treatment of boiler water, always start with a careful analysis of the water, made by a competent chemist who has had experience in this line. Next, if you are thinking of using any chemical that has been offered for treatment of your boiler water, let your chemist analyze it. If you are dealing with straightforward people, they will tell you the exact composition of their material, which your chemist can easily verify, after which he will be prepared to advise you properly."

The following extract from the report of The Bavarian Steam Boiler Inspection Association (1885) is also of interest in this connection: "All secret compounds for removing scale should be avoided. Such secret preparations are either nonsensical or fraudulent and usually contain one of two substances (soda or lime), recommended by the association for removing scale; generally soda, which is colored to conceal its presence and often adulterated with useless or even injurious substances. These additions are used to give the compound some fanciful name and serve to deceive the purchaser and to conceal from him the fact that he is buying simply colored soda or similar substances for which he is paying an exorbitant price."

Although boiler compounds tend in a great measure to obviate the difficulties due to bad water, still, boilers were never intended to serve as chemical laboratories, and the proper place for the treatment of the water is outside of the boiler. Mechanical plants, designed for this purpose, are now being sold by many firms. If the saving of boiler compound and the added efficiency of the steam plant is taken into account, they will be found to be, in most cases, profitable investments.

One missing rail on a very fine railroad would be more disturbing than Darwin's "missing link."

In the Realm of Thresherdom

Under this heading we will attempt to give each month something that will be of interest to everybody connected with the threshing fraternity. We invite your experiences and assure you that they will always find a place upon this page.

A Bunch of Trouble.

"Lines of threshers all remind us
Of hard work, and little made,
And departing, leave behind us
Debts, that never will be paid."

The season of 1906 which gave promise of being a fairly good one, turned out in my case to be one of the worst in my experience. Heavy and tangled straw, wild oats, accidents and mishaps of one kind and another, some unavoidable was the cause.

I had secured, as I thought, a good gang of men at the highest wages I have ever paid. Our first mishap was on the evening of the first day. The separator had been drawn a short distance from the setting. The engine backed to the straw stack for firing in the morning with the tank alongside of it. All hands had gone in to supper when fire was seen at the stack. Of course there was a rush, some on horseback and some on foot, and just in time to prevent any farther loss than the burning of the tool boxes and the destruction of some of the contents, and a slight scorching of the tank and wagon.

A few days after, when the drive-belt was thrown off it caught under the blower belt, wound around the shaft and was so badly cut in one place it had to be cut and laced. Next: The engineer in moving the engine, left the hose with one end on the injector, the other in the tank. As this one end refused to leave the tank and the other stuck to the injector, result—a broken injector and a loss of two hours in making repairs, which we were able to do as I had an old injector on hand. Next day it rained and the engineer washed out his boiler. On getting up steam next morning he found one of the parts had not been properly packed, result, boiler had to be emptied, part repacked, boiler refilled, loss, quarter of a day. Next, the over-rakes of the feeder broke and the whole thing went through the cylinder. We managed to keep running until a new set came from Wisconsin at a cost of \$6 and a loss through the break of at least \$20.

In addition to what I have mentioned we had minor breaks and stops of an average of perhaps two a day, for the first half of the season of twenty-two days. After this our greatest hindrance was through heavy and tangled straw and wild oats. We were over two days without a stop, on sixty acres, and had only 1,100 bushels. We ran another hard day on forty acres for 500 bushels. I then shipped the outfit with most of the gang about 100 miles west and struck a lot of very good threshing, mostly oats. Would have done very well here had the weather kept fine. All the stuff was in stack and most of it around

pond holes, making settings difficult and often taking as long to set as to thresh out a pair of stacks.

I remained with the outfit a few days, then returned home leaving a good man in charge. A few days later the foreman wrote me that the engineer had left, and he had got another. This man after threshing out a pair of stacks, and, backing to couple to the separator, lost his head and jumped from the engine allowing it to run into the separator making a bad smash which would have been a good deal worse had not the fireman at the risk of his life jumped up and closed the throttle. This incident has been immortalized in the enclosed lines written by one of the pitchers. On the day I got this letter the foreman wired me as follows: "Inspector called today and ordered fourteen new flues and a shut down until done.

Thinking an accident had happened I started off at once, taking an engineer with me and also made arrangements to have flues sent on. When I arrived I found the men in town. The inspector had left his certificate of inspection with a bailiff, with instructions to collect \$5, and to inform him (the inspector) if I ran the engine without putting the 14 flues. I paid the \$5 under protest as I had the certificate of another inspector in my pocket. Went out and examined the boiler, found the flues all right, steamed up and ran for two weeks and expect to run all next season without refluing. Of course, I appealed to the Minister of Public Works and do not yet know what will be the outcome.

This boiler had been reflued only the year before, and it had not been necessary to use the expander until a few days before this, when a few of the flues started to leak—a common occurrence late in the season, when the weather gets cold. I do not know a more useless expenditure than the money paid to boiler inspectors. They have cost Manitoba more than \$100,000, and I doubt if they have prevented an explosion or saved a human life. Even if they saved a few lives, it has cost too much as life has only its value, else a law might be passed forbidding the running of trains beyond a certain speed, say 20 miles an hour when there would be less destruction of life and property. There is scarcely a trade or occupation in which a man can engage where life could not be made more safe by the expenditure of money.

Will some of the threshermen give their opinion on the subject? There is another matter which I think is worth considering. I think all threshing should be done by the acre instead of by the bushel. It is the amount of strain that takes the

power and costs the money. Any experienced thresher will know on looking over a crop how long it will take him to thresh it. It would do away with the trouble that often arises at settling time.

JAS GLENNIE.

Macdonald, Man.

The Crew.

In these days of the modern steam thresher of large power and large capacity, the selection and handling of a threshing crew is one of the most important matters in the operation of a threshing outfit. In Western Canada where the threshing of the grain is one of the most important occupations of the year it is doubly necessary that the crew be picked with especial care and that certain of the men, at least, be experienced. Every crew must have a competent head or manager. The duty of the manager is to have charge of the machine and crew and see that everything is operating properly, arrange the work so it may be done in the most expeditious manner possible, economize time and expense to accomplish the most with the least outlay of labor; look after the welfare and comfort of the crew, and see that each one performs the tasks assigned him. Much depends upon him for the success of the machine.

To make the machine work properly and do its best it is necessary that each man should perform his part and it belongs to the manager (or owner) to see that this is done and should be entirely under his control for there is no place where a head or leader is more necessary than around a threshing machine. The manager should assert his rights in a firm and mild manner, never lose his temper and show anger or abuse any one, nor permit any of the crew to abuse each other. It is very demoralizing if there is one or more among the crew who is a bully and is permitted to exercise his inclinations on his fellow workmen.

In lay out the men for their particular work, it is good policy to place them, in so far as possible, in the positions for which they are best suited. Some men are good workers but are no good with horses, consequently they should be sent to the field rather than be allowed to drive the teams. Others may be handy around the separator and engine which makes them good spike pitchers for they can then help to move and set. Good spike pitchers can also better handle the feeder and keep a steady stream of sheaves going into the cylinder. The pitchers are depended upon to get the grain to the machine in quantities as fast as needed and in a manner to facilitate work. There should be enough pitchers provided so the machine will not be obliged to wait for grain or run partly empty, as it necessitates the remainder of the crew to be partly idle, and curtails

the earnings of the machine. They should work harmoniously with the end in view to make the day's work as profitable as possible for the machine. It is the better practice for each man to keep his particular position on his own side of the machine. He then becomes accustomed to moving the bundles in a certain way on that side, while on the other side the position would be reversed. The work will be performed much more expeditiously and with greater ease as the muscles become accustomed and hardened to a certain movement of the pitch fork.

All wagons and racks should be in first-class condition with tires well set and everything securely nailed and bolted. There is nothing that is more provoking or that consumes more valuable time than to have a wagon tire come off with a full load of sheaves on. Good teams should also be on hand that can draw any and all loads. No balky horses or "old skates" should be tolerated.

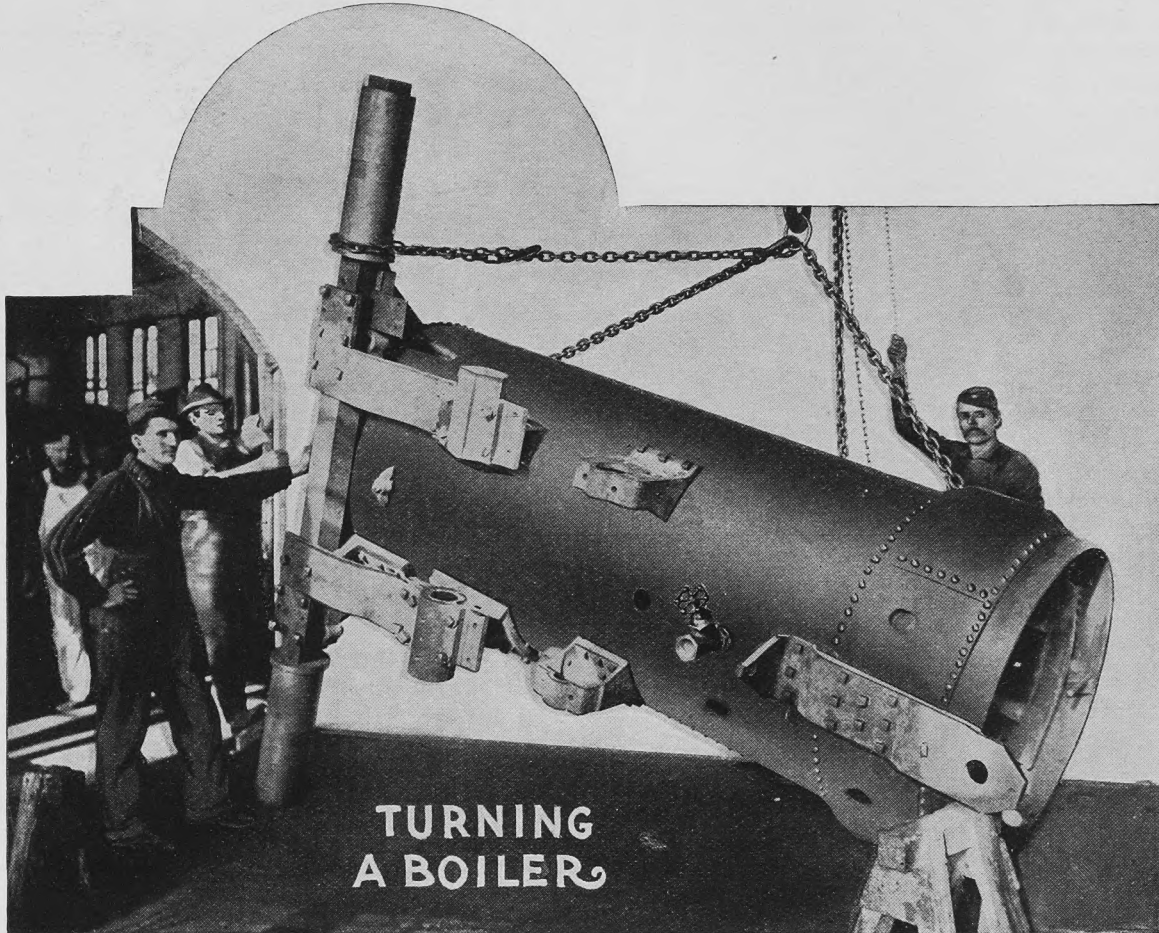
The method of paying the men is also one that should be looked into carefully. Some pay so much per day and board while others pay a certain sum for every day worked and charge a stated sum per day for board. The latter method is fair for both owner and men as it is but carrying out the old proverb that in order to eat man must work. Another method is to pay the men so much per hour for the actual time worked but this gives rise to a great deal of trouble and dissatisfaction. The first method mentioned is probably the one most in use and one that gives general satisfaction.

Get the best crew you can find, run it as a business proposition, feed the men well and work them hard and you will have no cause to lose money from that source.

Food for Reflection.

There is a crying demand for a uniform price for threshing grains of all kinds. This question is one on which the success or failure of this great industry depends. That almost everyone has either voluntarily or by force of circumstances cut prices, is well known. Now the thing to do is to correct the evil, and to do it at once. This can be accomplished only by the united effort of all persons interested in the business. The manufacturer is to blame for price cutting, in selling to unreliable customers—those who do not intend to pay for their machines, but who cut the life out of the business, preventing honest men from earning enough to pay for their machinery. This compels many men to follow the price cutter's lead from sheer necessity. They know that unless they push the thing for all there is in it, they cannot make their payments. Manufacturers often sell second-hand outfits, taken in trade, right back into the neighborhoods where they were originally used, and where the purchaser, hav-

THRESHERMEN LOOK HERE !



Method of Placing "HUBER" Boiler on Rear Axle.

Did you ever see an engine rear up in front when pulling a heavy load? Did you ever see a straight flue firebox boiler leaking at the bolt holes where the stub axles were fastened to side of firebox?

Examine above cut carefully. Note—our axle goes clear through in ONE piece UNDERNEATH the boiler. Also it passes at extreme REAR EDGE of boiler. No chance here for engine to rear in front, the heavier the pull, the more she will hug the ground in front.

Also, there are no STRAINS on boiler at BRACKETS. Boiler and brackets rest ON axle. CAN you find a firebox on above boiler and ash pan which will catch the ground at every slight obstruction? No you cannot, for the "Huber" firebox is inside the boiler ABOVE the straight axle where it can generate the most steam for the least fire. Boiler rides CLEAR of the ground.

Mr. Thresherman, examine the advantages shown in above photograph and you will come to but one conclusion, that before buying that new engine you are thinking of, it would be well to investigate the merits of the "HUBER."

Write

THE PORTAGE IRON & MACHINE CO. LTD.

PORTAGE LA PRAIRIE

-

MANITOBA

Exclusive Canadian Representatives for the Huber Manufacturing Company, Marion, Ohio.

ing bought one at a greatly reduced price, feels that he can afford to thresh for less than his neighbor, who has the new machine. Here is where the stickler comes in. It is human nature, and we are all guilty alike. If we have to pay the same price we will, of course, take the new machine; hence the purchaser of the second-hand outfit is forced to thresh for a lower price. The manufacturer has been forced to accept the old machine at a sum generally far above its real value, and he feels that he cannot afford to lose the money represented in it. Here is where both manufacturer and thresherman are equally guilty. If the old machine did not enter into the consideration of the trade, there would be fewer old machines sold to cause this trouble. Now, would it not be better for both manufacturer and customer to share the loss of the money represented in the old machine, and leave it out of the transaction entirely?

There are many questions to be considered in the matter of price cutting, and one and all must bear a reasonable share of the blame. The question is not one of looking backward, but of looking forward and solving this great problem. It must be solved, or the business can never be lifted up to a higher plane. Let the discussion go on, and let every one do his best to bring about this great reform.

Safety Tooth Catcher.

A very neat little device and one that will fill a long felt want is a safety tooth catcher manufactured by E. M. Pope of Watertown, N. D. It is attached to the lower side of the elevator at a very trifling cost and will catch any loose tooth or piece of iron that might work loose in the separator that would otherwise return to the cylinder and cause expensive trouble. Threshermen interested should address the above firm mentioning this paper.

Cylinder Teeth.

Up to the hour of going to press we have failed to hear from the price cutter as to why he did it.

Any thresherman who is proud of his business, will appreciate this issue of his own paper. To him it should be worth a year's subscription.

Get a thresherman's settlement book before you begin your season's work, you'll find that there's nothing like it for keeping an accurate record of accounts. See the add elsewhere.

Threshermen, make your settlements and adjust everything before you leave a job. One is too likely to forget details, and when you have a settlement all made it saves trouble in the hereafter.



A Case Traction Engine doing a winter stunt.

Save Up Windmill's Power.

It has often been asserted that one of the great drawbacks to the general use of windmills is the fact that when most needed the wind is at fault. They may serve passably well for milling and pumping purposes as they do when placed in localities where there are regular, brisk winds to depend upon. But for mechanical work that can only be carried on during the ordinary eight-to ten-hour work-day this becomes a serious inconvenience. As wind-power is available in most places from five to eight hours, and often twelve hours in the twenty-four, a means of storage of power for use at the time and place required would make it possible to obtain a uniform power during eight to ten hours from the intermittent power of the twenty-four.

This is exactly what a new power accumulator just brought out is designed to do, and not only to accumulate intermittent power for twenty-four hours, but for several hundred hours when necessary.

The power accumulator is the invention of Samuel A. Donnelly, a mechanical engineer of Chicago. He has selected compressed air as the most suitable medium for power transmission and storage. Four fundamental principles are combined in the accumulator: an automatic lever, an air pump, a hydraulic pump and an intensifier. The method of combination is unusual and is so different from all previous ones that basic patents have been granted to the inventor.

What might be termed the most unusual feature of the invention is an adjustable fulcrum for the lever. It is intended to adapt automatically the irregular forces exerted to a

constant and even load. As will be seen in the illustration, the power is applied to one end of the lever through a rod, as seen on the left-hand side of the illustration, coming from the windmill. The other end operates a piston which on its upper end acts in the air pump in compressing air and forcing it into the intensifier. The lower end of the lever operates in a simple hydraulic pump, in which is a mixture of water and glycerin. The object of the glycerin is to lubricate the cylinders through which the liquid is forced, to keep the water from freezing in cold weather and to assist in cooling the air as it is compressed from the pump, which is shown on the right of the invention. The liquid is forced into the intensifier, which is the central tube shown in the illustration, where it becomes the piston of the intensifier. The liquid piston operates upward, thereby intensifying the compressed air above it into such intense pressure as to overcome the pressure in the storage reservoir so that the load or charge may pass therein, the liquid piston automatically returning then to the receptacle shown below the intensifier.

To overcome the great range of variable pressures in the storage reservoir was the most difficult problem confronting the inventor, not only that the machine be operative, but that it should give as high an efficiency working under a load of fifty pounds as under a load of fifteen hundred pounds. As the pressure of the air under compression in the intensifier is increased, so is the power of the automatic lever increased by the movement of the adjustable fulcrum which operates automatically. The load end

of the lever gradually shortened thereby exerts greater power on the pumps in overcoming the pressure. The adjustable fulcrum is an integral part of the horizontal slide shown in the illustration, and is regulated in its movements by a piston which is exposed to the pressure in the intensifier. There being no heat developed in the air under compression, the machine is claimed to have an efficiency of over ninety per cent.

The power accumulator can be operated to store up any of the irregular powers, but the inventor has devoted most of his attention to its use in connection with the windmill. As standards to support a windmill hollow steel tubes are often used, which make a firm support. These steel tubes are also used as storage tanks for the compressed air, the capacity of storage plant being limited only by the size and the number of tubes put into it. Using a steel tube forty-five inches long by four inches in diameter as an intensifier, the inventor has secured air at a pressure of 4000 pounds to the square inch. With a longer tube Mr. Donnelly predicts that there will be no trouble in increasing the pressure to 3,000 pounds or even to 4,000 pounds.

To Tell the Age of An Egg.

A fresh egg will sink when placed in water and rest on its side; if three weeks old it will incline slightly with the small end down; if three months old it will stand on the small end, and if older it will float with large end out of water more or less, according to age.

Spring ambition often means harvest failure.



Will be of vital importance to the success of every settler, old or new, in the West. The New Western Reversible is built strictly for Western requirements and will be found in commission in years to come when other flimsy machines patterned after it have been sold as scrap.

Wide extensions and adaptation of cutting blade at all angles, extension and adjustment of rear wheels to follow action of blade when working in any position, correct distribution of weight, resisting strains where most severe and maintaining balance on side hills or in deep ditches, make the Sawyer & Massey Grader the choice of Road Machines for team or traction use.



Sawyer & Massey Co.,
HAMILTON, CANADA *Limited*
ESTABLISHED 1836

Sawyer & Massey Co.,
HAMILTON, CANADA *Limited*
WINNIPEG, MAN.

The Defendants Are Not Guilty

Was the verdict of Judge Phippen in the case of the King versus, J. C. Gage and others in the grain conspiracy case.

The judgment of his honor was as follows:

The defendants stand indicted for conspiracy under section 498 of the Criminal code. That section is as follows:

"498. Every one is guilty of an indictable offence and liable to a penalty not exceeding four thousand dollars and not less than two hundred dollars, or to two years' imprisonment, and if a corporation, is liable to a penalty not exceeding ten thousand dollars and not less than one thousand dollars, who conspires, combines, agrees or arranges with any other person, or with any railway, steamship, steamboat or transportation company:

"(a) To unduly limit the facilities for transporting, producing, manufacturing, supplying, storing or dealing in any article or commodity which may be a subject of trade or commerce; or,

"(b) To restrain or injure trade or commerce in relation to any such article or commodity; or,

"(c) To unduly prevent, limit or competition, manufacture, purchase, of any such article or com-

modity, or to unreasonably enhance the price thereof; or,

"(d) To unduly prevent or lessen competition, manufacture, purchase, barter, sale, transportation or supply of any such article or commodity, or in the price of insurance upon person or property."

Judge Phippen reviewed the case in a very thorough manner going over every phase of the grain trade carefully discussing it both from the standpoint of the grain dealer and the farmer. The local elevator question was discussed at great length. In summing up the Judge said:

"The safeguard to the grain grower, and to me it appears a very real and permanent one, is the impossibility of preventing the freest competition by the millers and the export purchasers. With the export market settled at its full value and with equivalent comparative local prices assured to the farmer by our present system of car distribution and loading, it would appear in the interest rather than to the detriment of the grain growers of our country that the intermediate profits between the grower and the exporter should be taken care of by a fixed, certain and reasonable commission rather than that the market should be destroyed, the legitimate dealer's credit impaired and the grain trade of our great Canadian West made sport for speculators.

DID IT EVER OCCUR TO YOU?

Said Farmer Jason Smith to Thresher William Brown,

"Your delays are the talk all over this town.

My advice to you—and I must take this stand—

Is to get busy quick—get a "LION BRAND."

LION ENDLESS THRESHER BELTS

For Monday, Tuesday, Wednesday, Thursday,
Friday, Saturday—Always Ready

Remember, Any Dealer Can Get You One

THE WINNIPEG RUBBER CO.
LIMITED

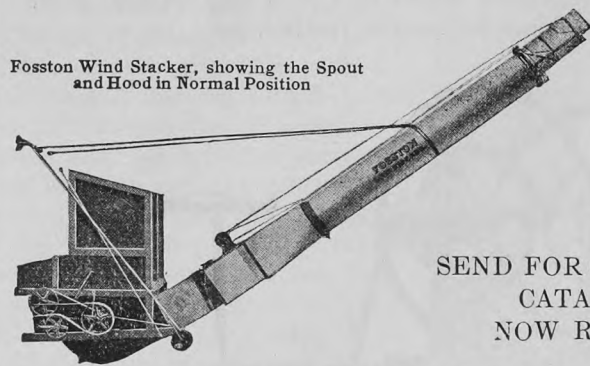
A. A. ANDREWS, Vice Pres. and Gen. Manager

41 Princess St. = Winnipeg, Manitoba

THRESHERMEN....

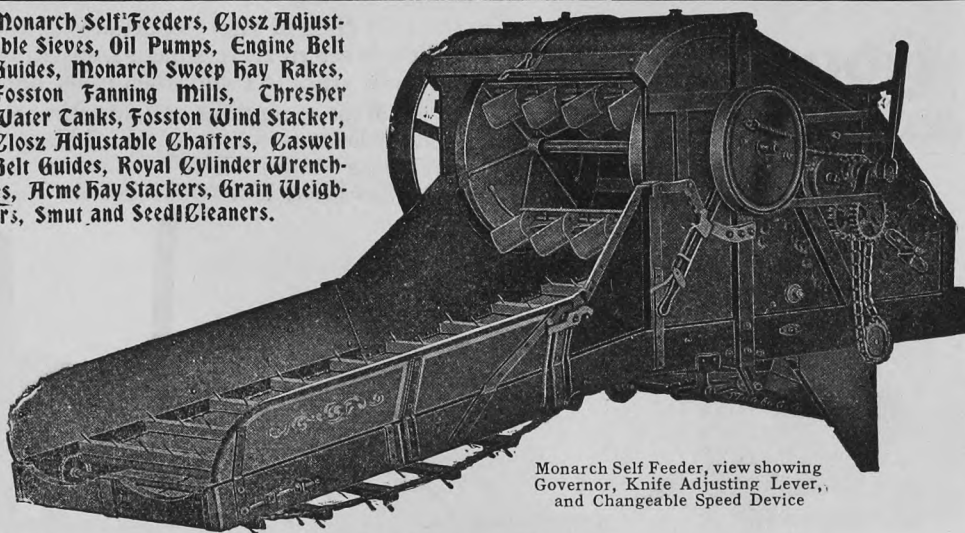
Don't forget that we carry the most complete and up-to-date line of thresher attachments in Canada.

Fosston Wind Stacker, showing the Spout and Hood in Normal Position



SEND FOR OUR NEW
CATALOG
NOW READY

Monarch Self Feeders, Closz Adjustable Sieves, Oil Pumps, Engine Belt Guides, Monarch Sweep Hay Rakes, Fosston Fanning Mills, Thresher Water Tanks, Fosston Wind Stacker, Closz Adjustable Chaffers, Caswell Belt Guides, Royal Cylinder Wrenches, Acme Hay Stackers, Grain Weighers, Smut and Seed Cleaners.



Monarch Self Feeder, view showing Governor, Knife Adjusting Lever, and Changeable Speed Device

Royal Manufacturing Company, Limited, Winnipeg, Canada

"For these reasons I find there was no undue restraint. Under my construction of the statute no evidence was offered to support the first and second counts in the indictment. The defendants are not guilty."

Threshermen's Experiences.

Plowing done on Wild Prairie.

Rouleau, Sask.,
Jan. 28th, 1907.

Canadian Thresherman and Farmer.

Gentlemen,—Regarding experiences with steam plowing. We did most of our plowing on wild prairie using three men and two horses. We used two Massey-Harris Imperial gangs. We used one cord of wood per day. Our engine is a 25 h.p. Sawyer & Massey, and we averaged eight acres per day. Our expenses were as follows for one day.

Engine.....	\$4.00
Three Men	6.00
Two Horses	2.50
One Cord Wood.....	5.00
Oil and Grease50

18.00 per day

We charge \$3.50 per acre for plowing—
Eight acres at \$3.50....\$28.00
Expenses 18.00

profit 10.00 per day

This is all the information we have at present regarding plowing.

Yours truly,

JOHAN BOLZANAZ.

Carries own Cook Car.

Pincher Creek, Jan. 25th, 1907
The Canadian Thresherman and Farmer, Winnipeg.

Dear Sirs,—In answer to your letter of the 11th, asking for our experiences with plowing by steam. We did considerable last season, the engine we used being a 28 h.p. J. I. Case engine with which we pulled four plows, and when the ground was in the best shape we pulled six, the plows used being two bottom horse plows, the John Deere make, with which we have had the best luck. When breaking we attached them by $\frac{5}{8}$ rods to a J. I. Case plow tender. Most of the plowing we have done so far has been breaking, but we pulled

eight plows on stubble, 2-4 bottom gang plows. When breaking we use two men on engine and two on the plows, a water hauler and man to haul coal, also a blacksmith, as the ground here is very rocky. We also carry our own cook-car and cook. We use four horses on both coal and water wagons.

We have averaged about nine acres a day, but we have plowed as high as fifteen when the ground was in the best shape. We use about 3,000 lbs. of steam coal in ten hours, which we get in carload lots from Bellevue, about sixty miles from here. We have to haul it all the way from ten to twenty miles from the station to where we are plowing, and it keeps four horses going steady. We use four or five twenty barrel tanks of water a day. The ground around here is very rocky and besides is hard ground to plow, which makes breaking here a hard job, as one can only go very slowly, and has to stop often to dig the rocks out or fix the plow when it runs into a rock and breaks.

If this letter is any use to you why we are glad to send it. Yours truly,

RICHARD STUCKEY & SON.

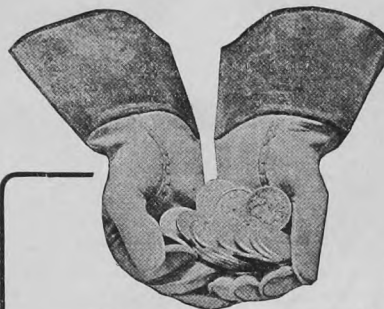
Estevan, Sask., Jan. 21st, 1907
E. H. Heath Co., Ltd., Winnipeg.

Gentlemen,—Our experience is very small in regard to operating a steam plow as it is our first year, and the rig was too late getting here. I will try and answer the questions you ask of us. The first on the list—we have operated the outfit one season, all on wild prairie. Five men are all we employed. Two teams, plows, four gangs with Hancock disc. Five tons of coal for 25 acres. Plowed twenty acres per day. Cost, \$1.00 per acre.

Yours truly,

ROBINSON BROS.

Not allowing the sweat and dust to remain on the hair keeps the coats of the horses in a much better condition, which is but the least incentive for a good cleaning up after the day's work is over.



The *SARGENT* Glove

... By Wearing ...

"SARGENT GLOVES"
You Save Money

Because you buy fewer gloves during the year.

They are made from Chrome Tanned (heat and waterproof) horse hide leather, and when soiled can be washed with soap and water.

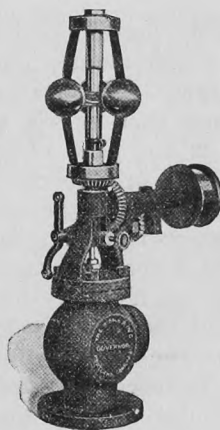
There are no rivets or seams to hurt the hands. Should your dealer not carry "Sargent's" we will sell you direct upon receipt of your size and \$1.35, post paid. Lined gloves 25c extra.

Write for illustrated booklet telling how an honest glove is made.

Detroit Leather Specialty Co.

EXCLUSIVE MANUFACTURERS

DETROIT, MICH



PICKERING RANGER

PERMITS ADJUSTING SPEED
OF ENGINE WHILE RUNNING

**Save You Fuel and Add
to Your Power**

No extra charge. Write for particulars
and new Catalog.

CANADIAN PATENT MARCH 12, 1907.

**The PICKERING GOVERNOR
COMPANY.**
PORTLAND, CONNECTICUT, U.S.A.

Field Erected—with No. 9 Galvanized
Coiled Steel Wire



Heavy coiled steel wire fence, hard steel wire lock that does not rust or slip and kinks both wires. All heavily galvanized, and is replacing other makes of fencing using lighter gauged wire. Can be erected as cheaply as barb wire and

DOES NOT INJURE STOCK.

WRITE FOR CATALOGUE.

BUY THE BEST.

AGENTS WANTED.

THE GREAT WEST WIRE FENCE CO. LTD.

76 Lombard St.,

WINNIPEG, CANADA.

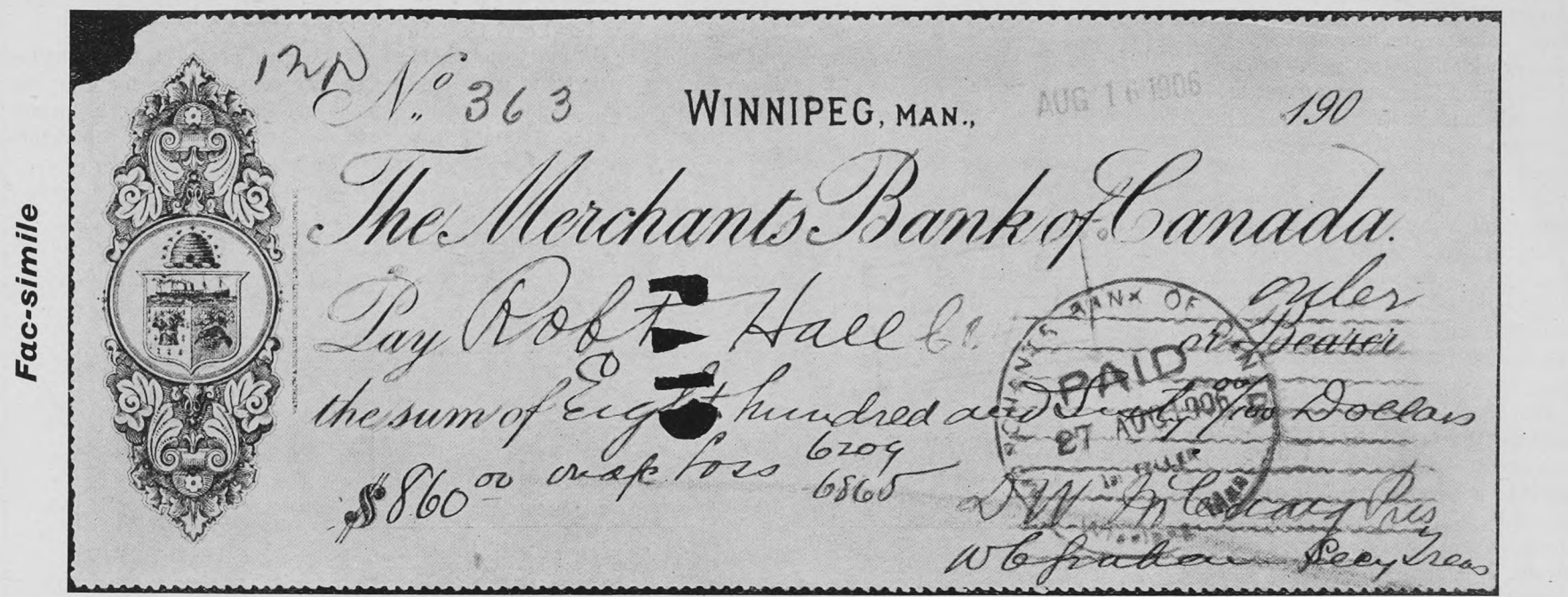
Two 50% Payments Made

At time of adjustment out of 286 loss claims. 1906 Loss Claims \$51,485.47 paid in full

\$2,700,000
Insurance now in force

Rate of Assessment Last Year, 14 Cents per Acre
Over 3750 farmers now insured with us

Assets, \$121,000
which includes available revenue
for 1907 on insurance in force

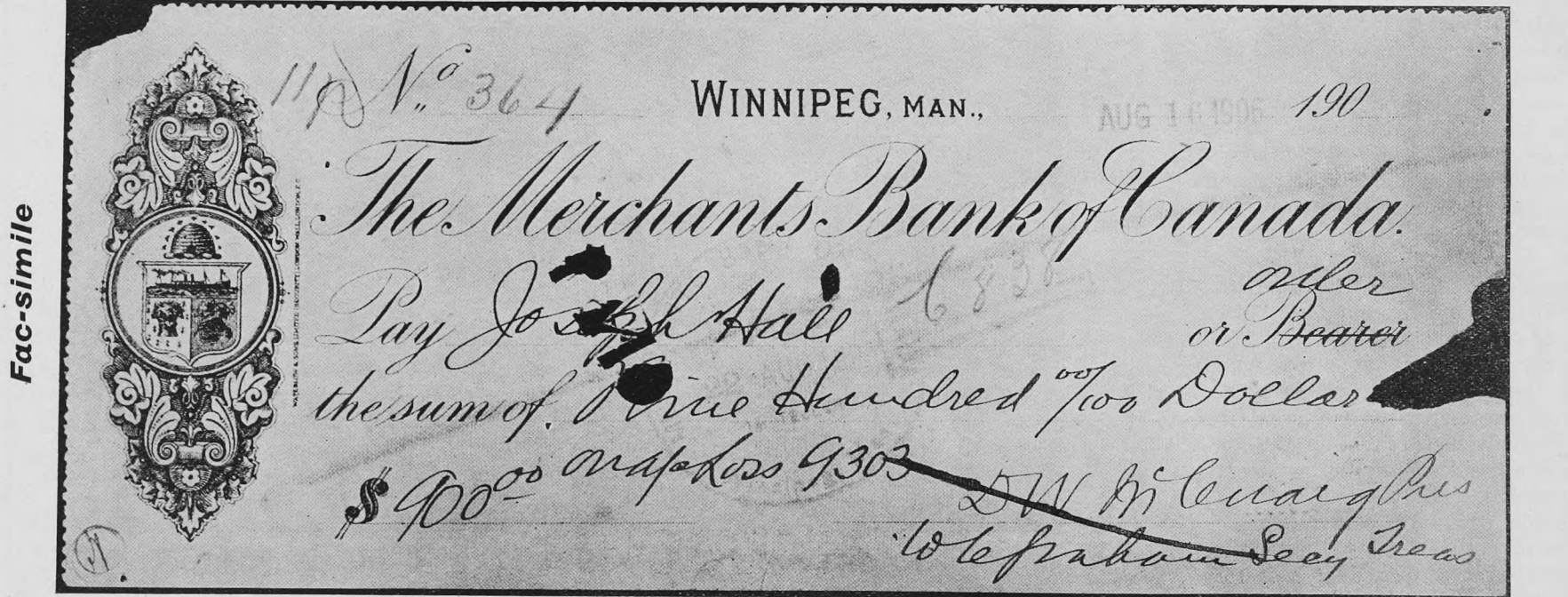


Manitoba Farmers' Mutual Hail Insurance Co.
Underhill, Aug. 21st, 1906.

Dear Sir:—I have much pleasure in thanking your company for the promptness they have shown in regard to my loss by hail. Your agent is a fair and square man both to the farmer and the company, he was here on the 14th inst. and two days later the cheque came for \$860.00. Considering the amount of ground he had to cover I think it quick work. I shall most decidedly recommend your company to my brother farmers.

I am, yours sincerely,
(Sgd.) ROBERT HALL.

Total claim \$1722.50



The Manitoba Hail Insurance Co.
Elgin, Aug. 18th, 1906.

Dear Sir:—I received your cheque for \$900.00 being part payment of my loss claim and am satisfied with the quick and satisfactory way my claim was adjusted.

I remain, yours truly,
(Sgd.) JOSEPH HALL.

Total loss \$1800.00.

ARE YOU INSURED FOR 1907 ?

If not, see our Agents or write the Company

The Manitoba Farmers' Mutual Hail Insurance Co.
W. C. GRAHAM, Manager.

J. H. SCHULTZ, Field Manager.

DIRECTORS FOR 1907 (All Farmers)

D. W. McCUAIG, President, Portage la Prairie.
JAS. STEEDSMAN, Vice-President, Deloraine.
GEORGE CAREFOOT, Virden.
WM. GARVIE, Holland.
JOHN VANCE, Brandon.

Care of Cream on the Farm

WITH SOME GOOD ADVICE.

THE problem of caring for milk and cream on the farm, like nearly every problem of farm life, has radically changed in the last fifty years. At a time within the memory of many of us, the milk was "set up" in pans or jars, left to stand for thirty-six hours or longer, when mother skimmed the thick, sour cream into an earthenware crock and, after a due process of "ripening," it was churned into the delicious butter of our childhood memory. Then creameries began to appear in cities and villages, sending their wagons throughout the country to buy milk of the farmers. What a boon to the overworked housewife, when the milk could be strained into a large can and daily sent away, relieving her of any further care concerning it!

But another change in the care of milk on the farm has taken place. The cream separator is rapidly coming into general use and instead of the daily delivery of whole milk, cream is sent once or twice a week to the creameries and the farmer keeps the sweet, separated-milk, on which to grow and fatten his stock. E. H. Farrington gives a valuable discussion of the care of cream and separator in a bulletin published by the Agricultural Experiment Station of the University of Wisconsin, a part of which follows:

The problem of caring for the cream so that it may be delivered to the creamery in good condition is a serious one because it has an important bearing on the quality of the butter. In many cases, butter made from cream not properly cared for does not sell for the top market price, and since there is a growing tendency to sell butter on its merits, giving only the price its quality deserves, there will be difficulty in disposing of butter made from a poor quality of farm separator cream, at prices equal to those of butter made at whole-milk creameries. Considering the question, however, from the mechanical side of the butter making process alone, there is no good reason why farm separator cream should not be equal to, if not better than, that separated at a factory with power separators.

When milk is separated at the farm immediately after milking the cleanest and sweetest cream possible ought to be obtained; it certainly should be better than that skimmed by a factory separator from milk which is from two to twenty hours old, and on this account a better butter should be made from the farm separator cream.

The usual causes of defective butter from gathered cream are: First, unsuitable places for keeping the cream, and second, holding the cream too long before it is collected

by the cream gatherers. A perfectly clean, sweet and satisfactory cream is produced on many farms in the state and delivered in good condition to either a retailer, an ice-cream maker or a creamery. There are, however, places where tainted and defective cream is found and in some cases it is being mixed with cream of a better grade. This is hardly fair to the producer of first-grade cream and in order to raise the standard of the entire product to a grade equal to the

cream from the sour bowl. This applies to all kinds of cream separators.

3. Wash the separator bowl and all tinware with cold water and then with warm water, using a brush to polish the surface and clean out the seams and cracks; finally scald with boiling water leaving the parts of the bowl and tinware to dry in some place where they will be protected from dust. Do not wipe the bowl and tinware with a cloth or drying towel; heat them so hot with steam or boiling water that wiping is unnecessary.

4. Rinse the milk-receiving can

sixty degrees F. A satisfactory arrangement may be made by allowing running water to flow through the cream tank to the stock watering tank.

8. Skim the milk immediately after each milking, as it is more work to save the milk and separate once a day, and less satisfactory, than skimming while the milk is warm, since the milk must be heated again when saved until another milking.

9. A rich cream testing thirty-five per cent. fat or more is the most satisfactory to both farmer and factory. The best separators



best, the following suggestions are offered as a guide to persons not familiar with proper methods of caring for cream:

1. Place the separator on a firm foundation in a clean, well-ventilated room where it is free from all offensive odors.

2. Thoroughly clean the separator after each skimming; the bowl should be taken apart and washed, together with all the tinware, every time the separator is used; if allowed to stand for even one hour without cleaning there is danger of contaminating the next lot of

and separator bowl with a quart or two of hot water just before running milk into the separator.

5. Cool the cream as it comes from the separator or immediately after, to a temperature nearly fifty degrees F. and keep it cold until delivered.

6. Never mix warm and cold cream or sweet and slightly tainted cream.

7. Provide a covered and clean water tank for holding the cream cans, and change the water frequently in the tank so that the temperature does not rise above

will skim a rich cream as efficiently as a thin cream and more skim milk is left on the farm when a rich cream is sold.

10. Cream should be perfectly sweet, containing no lumps or clots when sampled and delivered to the haulers or parties buying it.

There is a good demand for sweet cream and it can easily be supplied by keeping the separator, tinware, strainer-cloth and water tank clean and the cream cold.

The preceding recommendations when followed will pay well for

TOTE FAIR WITH THE FARMER

He has a right to expect the best results from you.
He has a right to expect you to save his time and all his grain.
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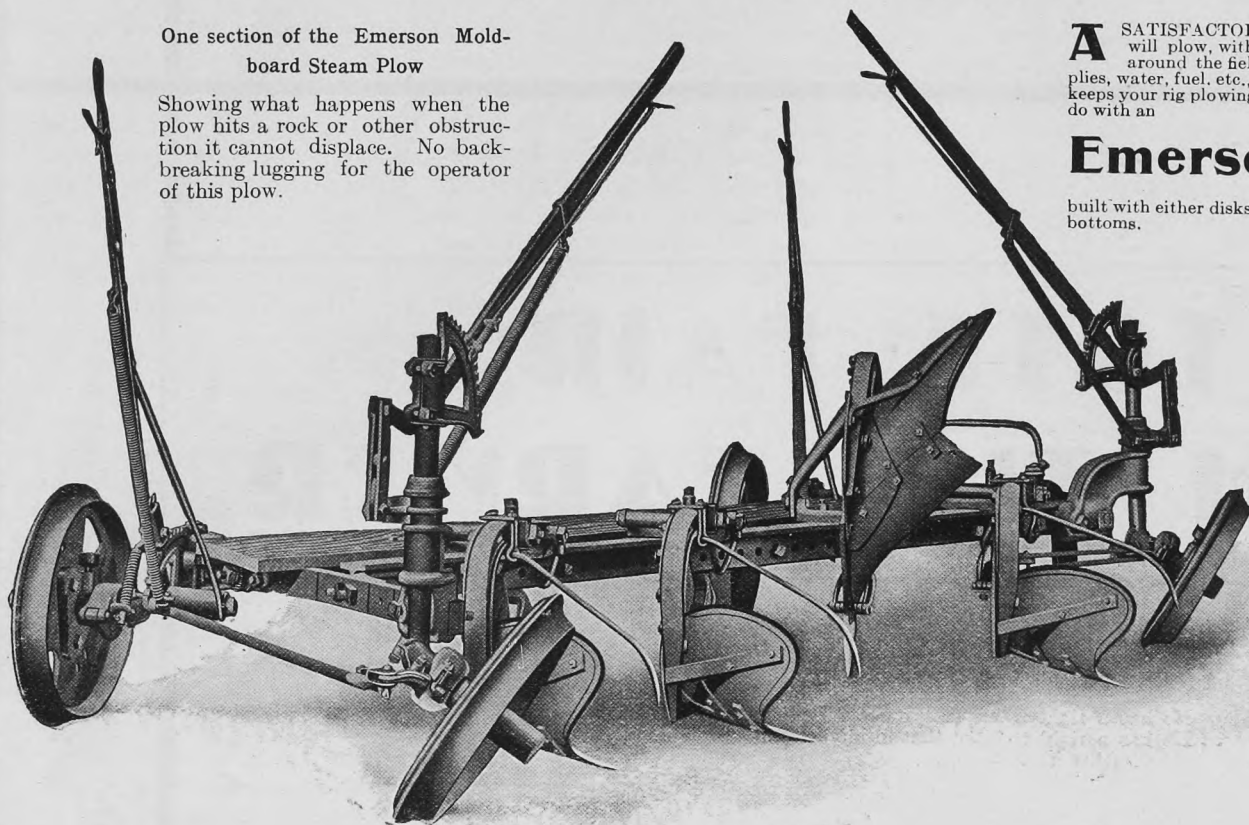
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built with either disks or moldboards with prairie breaker or old ground bottoms.

The frames of the plows are alike, built in flexible sections with the

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insuring an even width of cut whether turning a round corner or running straight away.

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what some may think is "a lot of extra bother."

One of the things which some owners of farm separators do not understand, is the cause of variations in the richness of the cream. Most of them have learned that the cream screw of the separator may be so adjusted as to increase or decrease the thickness of the cream, but they may have noticed that sometimes the test of their cream at the creamery will vary considerably from week to week, even when the cream screw has not been changed. The farmer does not understand this and is likely to conclude that the cream is not being accurately tested at the factory.

This is a matter which has caused considerable trouble in the past and may in the future, unless the owners of farm separators get a better understanding of the cause of variations in the test of cream when the cream screw adjustment is not changed.

Nearly all creamery buttermakers are familiar with power cream separators and they together with the agents selling separators to farmers ought to instruct the buyer regarding the proper running and cleaning of separators. They should also give directions for taking care of the cream until it is delivered to the cream buyers.

Cream of nearly any thickness may be obtained from a hand separator, but under the ordinary

farm conditions of running these machines, variations in the richness of the cream are caused by:

First—Changes in the temperature of the milk.

Second—Changes in speed of the separator bowl.

Third—A variation in the amount of milk run through the separator in a given time.

Fourth—The amount of skim milk or water used to flush the bowl when through separating.

Fifth—Changes in the richness of the milk, either from morning and night's milk or from changes in the lactation period of the cows.

These five conditions will influence the test of the cream even though the cream screw is not changed. But, on the other hand, cream of uniform richness may be obtained from a separator by avoiding, so far as possible, variations in the conditions just mentioned.

A thin cream is obtained by running the separator below speed, by skimming hot milk, or by crowding the separator, i. e., trying to force milk through the separator too fast; also by using too much skim milk or water to flush out the bowl when through skimming. A thick or rich cream will be obtained when the opposite course is adopted in running the separator.

When cream stands for any length of time the top layer will be richer than the cream below;

this makes it necessary to thoroughly mix each lot of cream by pouring from one can to another just before taking a sample for setting. If the cream is lumpy it should be poured through a fine hair-sieve before sampling.

Gathered-cream factories have in some cases adopted the following method of sampling cream: Each driver is provided with a box of numbered bottles having a capacity of about four ounces each, one bottle being provided for each patron. This box is protected from heat in summer and cold in winter so that the sample bottles of cream may arrive at the factory in nearly the same condition as when taken from the farms. This gives the butter maker a chance to inspect each patron's cream and locate the defective lots, if there are any.

After inspection at the factory, the samples are poured into composite sample jars which contain a preservative. No preservative is added to the bottles taken to the farms by the man who weighs, samples and gathers the cream, but he must protect these samples from changes caused by heat and cold during the different seasons of the year.

In some factories each lot of cream received is tested, as this is considered more accurate and satisfactory than tests of composite samples.

Two Helpful Farm Machines.

By G. L. VINCENT.

We're all out of ground feed, father. Got to go to mill right away."

"Pretty stormy trip today. We'll have to get along some other way till the sky clears up. Bad for the horses and the men, too, who have to go out in this rain."

That is the way it was yesterday. Now, on hosts of farms, and the number is growing greater every day, something like this is the father's answer when the young man of the household announces that the grain bins are getting low:

"All right. Hitch the horses to the feed mill."

Or perhaps this may be the reply: "The gasoline engine will grind out enough to last a week in half an hour. Fire it up, boys."

And do the boys need much time to get a hustle on them when it comes to an injunction like that? Machinery of any kind puts joy into a young man's heart and sets his blood to running a neck and neck race with the wheels of the thing they are to set in operation. No going out in the cold and storm to do this work either. Horses, men and all are snugly under cover and nobody gets his death of cold driving away over the country to mill.

It is not the dollars we make that give us a good standing at the bank.

It is what we save. Take the mill bills of a big farm in any one year and see how they run up. It would surprise most of us if we would keep such an account a single year. True, it takes time and sometimes fuel or horse power to do this work at home. But usually such expenditures cost much less than we would pay if we hitched up and drove to mill.

Nor is this all. If we have a good feed mill on the farm, we will be much more apt to use ground feed than if we are dependent on the millers to grind for us. Instead of going to mill for feed for the horses and the cattle, we will throw out the oats and other grain whole and let the animals do their own grinding. They will do it after a fashion; but any man who has followed a team of horses around or noticed what the cattle leave behind them when whole grain is used will not need to make any further inquiry to be satisfied that they are losing a good part of the value of their costly grain. But if they do need any testimony, the experiment stations have all we may seek in that line. They have showed by repeated experiments that it does pay and pays well to have the grain they feed ground. Horses and cattle fed ground feed will fatten faster and do better at work than when compelled to grind their own feed.

But there is another machine which is coming more and more into general use among the farmers of this country, and that is the hay press. Unless a man has a large farm, devoted particularly to the growth and selling of hay, perhaps it might not be best to invest in this machine; but two or three neighboring farmers might buy one together and use it to great advantage in pressing and preparing their stock for the market. Pressed hay is certainly greatly in favor in the



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markets of the world today. In fact, it is the only way one can get his hay to any but the nearby, local market. Straw in like manner must be baled if we are to sell it anywhere except in the market right at our doors. We will say nothing of the ease and comfort with which baled hay or straw may be moved when compared to the difficulty of handling loose material.

But where neighbors do not see the necessity of purchasing hay presses, there is good money for the man who will invest in them and serve those who have hay and straw to sell. On many farms of this country, both East and West, there will be, taking one year with another, some surplus hay that may well be disposed of. When hay bears a high price, as it has done most of the time of late years, it is more profitable to sell some of the hay and buy other feed, if it cannot be produced on the farm. I am not, as a rule, in favor of selling anything in the line of fodder off the farm. It seems to me there is no way half as good to keep up a farm as to feed out everything possible on the premises. In the past, some of us have not been as thoughtful as we should have been about this. We know what the consequences have been, and the general opinion is that the time has come to put a stop to this terrible drainage of soil fertility.

On the other hand, the question arises, does it pay to feed high-priced hay and grain to low-priced hogs or horned cattle? A great many are going to say "No" to this proposition and say it in a very emphatic manner before the world is much older. For this reason, the hay press will come into play and we will resort to some less expensive way of feeding and fattening pork and beef.

In one way, the hay press is doing the farmers of the country an injury. This is especially true in the East. Men there do not expect to compete with the West in growing pork and beef. The hay from their farms is about the most valuable thing they have to turn off. There is, therefore, a temptation to sell off the stock and make a specialty of growing hay. In far too many instances this is the ruination of the farm. Little or nothing is put back in the way of fertilizer. Gradually the farm loses its productive power and sooner than we know there is a poor worn-out piece of land on our hands and quickly a sign hangs out, "This place for sale." The hay press is not the cause of this, but it is misused in the emergency we have mentioned, and so works injury.

But used as it is intended to be used, intelligently and with due regard to the condition of the farm tomorrow, as well as that of the pock-

et-book today, this is one of the most valuable of the many beautiful and important machines at the present time before the people of this great country of ours.

To Build Big Addition.

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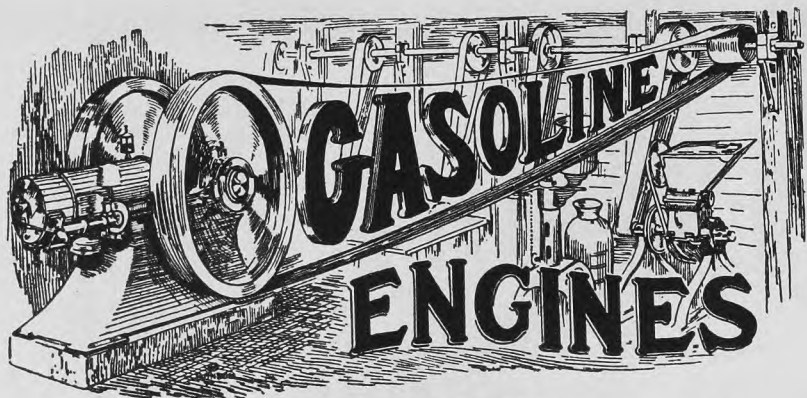
For over fifty years Gillett's goods have been before the public and the great expansion of the business testifies in clarion tones to the merits of these standard articles. Magic Baking Powder is a name to conjure with in almost every household in Canada. This is true to almost the same degree of their other staples. The growth of the business of E. W. Gillett Company has been so great that a further extension to their large factory in Toronto has been decided upon. This addition will represent an expenditure of \$30,000.

The man behind the monkey wrench is oftentimes a dangerous quantity around the threshing machine.

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Timing Gasoline Engine Valves.

We had recently shipped an engine to a party in a western town and the buyer was paying the extra cost of our sending a man to install it and instruct them in the care of it. We arranged with Bill to go out and do the job and asked him to go in and see how Smith's engine was doing. Smith was a butcher, with a reputation for making fine sausage and used the engine for that purpose. When Bill had time to call there he found Smith had moved into a new shop and had a vigorous kick coming. He said that at first the engine had plenty of power and never took more than 2 or 3 charges before missing one and now it took it all its time to do the work, and in fact did not run to full speed when the load was the heaviest. He certainly was "some sore," as Bill explained and chewed away about paying a good big price and should have had a good outfit; one that would have kept in good shape a long time.

"When did she begin to act up?" Bill asked. Smith replied, "she never run right after we moved in here."

Now Bill hadn't been fussing around gasoline engines some 12 years for nothing and had been sizing the place up while talking and when Smith answered him, he gave his usual grunt and says, "Just what I thought," "How did you bring her in here?"

"Through that door," says Smith. "Pretty narrow for the job, wasn't it?"

"Well you see we took the crank shaft and fly-wheels off and that left lots of room and made it lighter to handle too," Smith informs him.

"Who put it back on again?" asks Bill.

"We did and got the pump man from down at the station to help so we would get the gears together right."

Bill grunted again and Smith continued: "Oh, you can bet there right, for Fred Brown has run that gasoline pumper for two years now and got it fast right."

"Well we'll see anyhow," says Bill and took hold of the wheel on the engine and turned it over until

he found the exhaust valve just commencing to open and saw that the crank was on the dead center on the out stroke. Now this was a 4-cycle horizontal engine with an automatic or suction lift, inlet valve. This being the case the inlet valve takes care of itself by opening to let in the charge as soon as the suction is strong enough to lift it. The exhaust valve is mechanically opened and is the one requiring to be properly timed.

When Bill straightened up again, Smith says, "Just right; ain't she?"

"Well its not the way I'd set it," says Bill.

"How'd you do it, then?" and the tone of Smith's reply showed he thought Bill did not know any too much about it and riled him.

"Do it proper, and do it quick too and don't you forget that I didn't learn it all by running a gasoline pumper at a whistling station on the prairie, either," says Bill.

Bill took a wrench, unscrewed the nut that held the large, or secondary gear in place, slipped it along on the stud until it was out of mesh with the teeth of the small gear on the crank shaft and turned it back two teeth, pushed it back on the stud and found that, while it began to open the valve before the crank came to the center, it did not begin soon enough so he brought the gear out of mesh again and moved it back another tooth. On trying it again it looked pretty good to Bill so he pulled the engine over and noticed the position of the crank when the cam just let the valve close again. He found it was just as the crank reached the dead center on the back stroke, if anything a trifle below it, and Bill left it alone at that. The timing of the spark was then tried and shifted a little as Bill found they had set it too early in endeavoring to get the power out of the engine.

"Try her now," says Bill.

They did, and on the second turn she went off in good shape and they soon were at work on a batch of sausage meat and Smith said it worked as well as it ever did.

That evening Smith brought Fred Brown around to the hotel and, as he proved to be a good fellow and anxious to pick up any points he

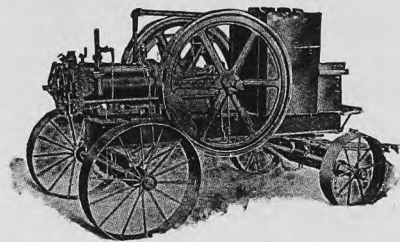
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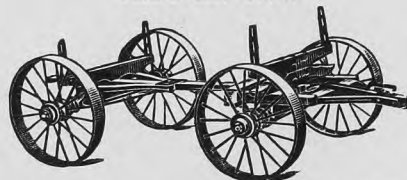
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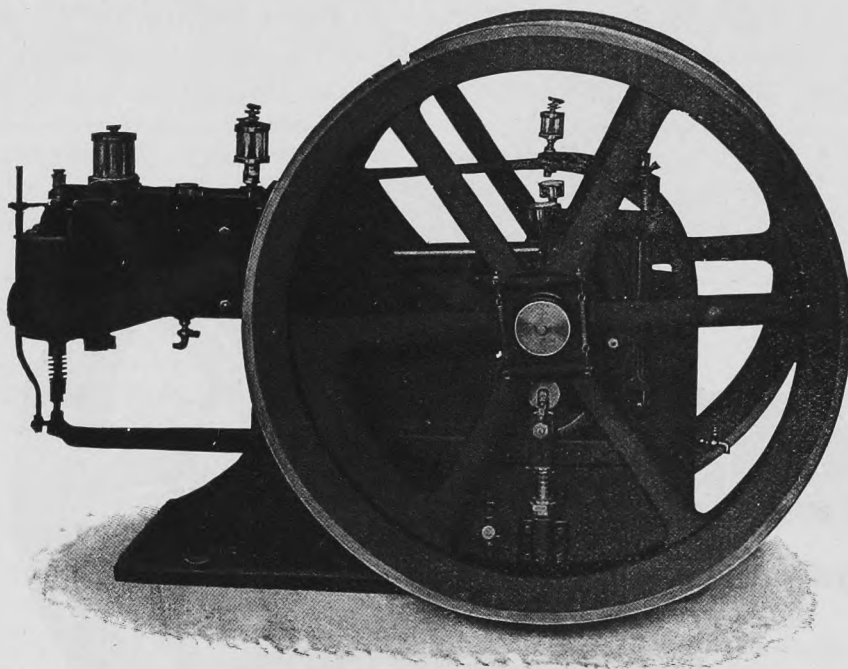
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An up-to-date line that will interest you. Our No. 1 Machine is one of the most complete and automatic on the market. Our No. 2 machine is one of the cheapest, most complete and successful operating machines made.



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could, Bill got busy and explained that it was necessary to have the exhaust valve open about one-sixth or one-seventh of the stroke, or piston travel, before it reached the out end of the working stroke in order to let the exhaust fall to the pressure of the atmosphere by the time the piston commenced to travel back and this prevented any back pressure on the piston. Bill gave Fred a lot more points and he, and the firm, made a good friend in a business way.

Smith asked Bill how much he owed him. "Nothing" says Bill, "the boss said to do anything wanted".

When Bill got to the train next morning Smith was there with a bunch of sausage well done up and after getting to the shop and telling his experience Bill dumped out the parcel and says, "I collected that." We opened them up and divided with Bill. Next morning we remarked to Bill "Those sausage were certainly fine, how were yours Bill?"

Bill grunted and said, "oh, not too rotten,"—and we let it go at that.

How Gasoline is Converted into Power.

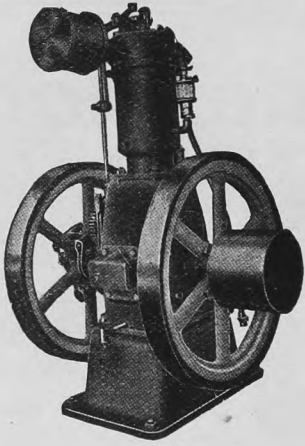
It is yet a mystery to many persons that the gas or gasoline engine develops power without a boiler. The steam engine has been in use so much longer that almost everyone

who has not come into direct contact with the use of the gasoline engine connects, in his mind, a boiler with anything that is called an engine. And often we hear prospective purchasers of gasoline engines say that they know something of the steam engine but know practically nothing of the gasoline engine, indicating that they look upon it as something strangely mysterious yet very convenient when power development and application are considered. We are just in receipt of a letter from a newspaper office that is considering the matter of installing a gas engine to run its presses in place of the electric motor which has been doing the work. They write that they have investigated the gasoline engine quite a little, but that the more information they get the less they know about it. I believe they are sincere in what they say. They are confused as to the principle upon which the gasoline engine operates. They haven't yet learned that it operates on the same principle as an ordinary gun or cannon, which drives its ball by means of an explosive material such as gun powder. The cylinder of the gasoline engine is the gun barrel. The piston is the ball and the gasoline is the powder. Here the similarity in application and construction ceases. The piston or cannon ball, instead of being hurled out of the end of the cylinder, is connected by means

of a pitman to a crank shaft and a pair of fly wheels. And when it is forced on its outward movement by the explosive gasoline it can only go to the length of the throw or stroke of the crank shaft when the revolving momentum of the fly wheel rims carries it back to its starting point. Therefore, the explosive gasoline is used in the same manner as gun powder, but instead of throwing the piston (the ball) to a great distance, as a means of destruction, its force is harnessed up to drive a pair of fly wheels and to keep them constantly turning, and from the shaft on which they are mounted is taken the surplus power thus developed to drive other machinery. The above illustrates, by comparison, the principle involved in the development of power in the gasoline engine, but it does not indicate the manner in which the gasoline is handled so as to produce the many successive and rapid firing impulses. Gasoline, in its fluid state, is not explosive. Only in the form of vapor can it be ignited and then only when mixed with air in certain proportions. Fluid gasoline in a warm temperature is very volatile. That is, it changes from the fluid state into vapor. This vapor mixes with the surrounding air, and when the proportion of one part of vapor to about eight or ten of air is reached, a lighted match or an electric spark

within this charged mixture will cause ignition and explosion.

An explosion is only a rapid combustion, a quick burning. Since gasoline must first be in the form of vapor and mixed with air before it becomes explosive, and since it has the quality of changing instantaneously from the fluid to the vapor state and at the same time mixing with air, it has been chosen as the most convenient and adaptable of all the hydro carbons for use in explosive engines. The piston movements serve to draw air into the cylinder by their suction force, and if fluid gasoline is dropped into or brought in contact with the current of air it rushes through the valve passages on its way into the cylinder, it at once changes into vapor and charges the air, making an explosive gas of it. The valves of the gasoline engine are so arranged that they open and close regularly to the movements. When the piston is on one of its out strokes the receiving valve opens and the air rushes into the cylinder to fill the otherwise vacuum. At the same time the gasoline valve is opened and the fuel comes in contact with the current of air, vaporizes and mixes with it, and when the piston has completed its out stroke, gasoline and air valves close and the cylinder is filled with an explosive mixture. The return stroke of the piston compresses this mixture into the



FACTS ARE STUBBORN THINGS

They have an aggravating way of refusing to be evaded. You may have long since concluded that gasoline engine power is not necessary on the farm. That it is cheaper to accomplish the work by hand in a slow, laborious way. But the stubborn fact remains that you are mistaken.

The pumping of water, driving a cream separator, operating a fanning mill and furnishing power for the feed grinder and small thresher are a few of the places where an engine is required on the farm. The economical and satisfactory way to do this work is with I.H.C. gasoline engines. Being simple in construction, as well as easy to start and stop, they are particularly well adapted for the purpose. No engineer is required;

they consume but little fuel and have long wearing qualities. If you will investigate these engines you will be much interested in their many features of distinct merit. The small vertical engines are made in 2 and 3-horse power sizes. The horizontal stationary and portable engines in 4, 6, 8, 10, 12, 15 and 20-horse power sizes.

Your nearest local agent will be pleased to give a demonstration, or furnish descriptive illustrated catalogue.

Western Canadian Branch Houses:

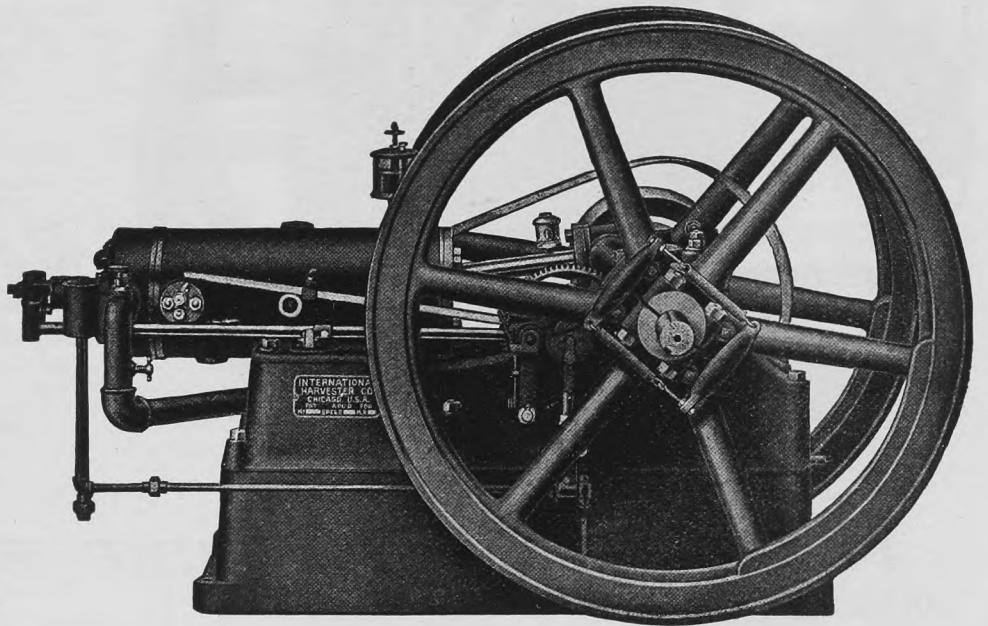
Winnipeg, Man. Regina, Sask. Calgary, Alta.

International Harvester Company of America.

(Incorporated)

Chicago

U. S. A.



rear end of the cylinder. Just as the piston starts on its next out stroke, the charge or mixture is ignited by means of an electric spark or red hot tube. The intense heat resulting by the explosion or quick burning of the gas, cause heavy expansion and drives the piston out with great force.

This outward stroke of the piston is the force or working stroke, and is the only one in four movements that has any working pressure on the piston. After this power stroke comes the exhaust or next inward stroke of the piston, at which time the exhaust valve opens and lets the burnt gas and the expansion pressure that has not been used up in power, out into the open air.

Four movements of the piston, two out and two in, are required to complete a cycle of necessary acts. These four acts suggest the name Four Cycle. They are named or described as follows:

First outward piston stroke. Inhalation. Drawing in the mixture.

First inward piston stroke. Compression of the mixture.

Second outward stroke. Explosion. Expansion, power stroke.

Second inward piston stroke. Exhaust. Clean cylinder of burnt gas.

After these four acts, the next four movements of the piston may repeat them, and so on continuously while the engine is in operation under full load. The inhalation

and compression strokes represent one revolution of the fly wheels. The expansion and exhaust strokes another revolution. The working stroke can only come every other revolution in a four cycle single cylinder engine. The heat resulting from the burning of the gasoline vapor or gas within the cylinder is applied or directed against the piston and thereby converted directly into power, in contrast with steam, where the fuel is burned under a boiler to heat water, converting it into hot vapor or steam, then the steam to the piston—a sort of a "House that Jack Built" proposition.

Some Conclusions Regarding the use of Alcohol for Farm Power Purposes.

The following conclusions regarding the use of alcohol as fuel for engines as compared with gasoline are based on the preliminary results of the department's experiments, upon results of the European experiments and investigations which have been presented in the foregoing pages, and upon the general knowledge of the authors:

1.—Any engine on the American market today, operating with gasoline or kerosene, can operate with alcohol fuel without any structural change whatever with proper manipulation.

2.—Alcohol contains approximately 0.6 of the heating value of gasoline by weight, and in the department's experiments a small engine required 1.8 times as much alcohol as gasoline per horse power hour. This corresponds very closely with the relative heating value of the fuels, indicating practically the same thermal efficiency with the two when vaporization is complete.

3.—In some cases carbureters designed for gasoline do not vaporize all the alcohol supplied, and in such cases the excess of alcohol consumed is greater than indicated above.

4.—The absolute excess of alcohol consumed over gasoline or kerosene will be reduced by such changes as will increase the thermal efficiency of the engine.

5.—The thermal efficiency of these engines can be improved when they are to be operated by alcohol, first by altering the construction of the carbureter to accomplish complete vaporization, and, second, by increasing the compression very materially.

6.—An engine designed for gasoline or kerosene can, without any material alterations to adapt it to alcohol, give slightly more power (about 10 per cent.) than when operated with gasoline or kerosene, but this increase is at the expense of greater consumption of fuel. By alterations designed to adapt the engine to new fuel, this excess of power

may be increased to about 20 per cent.

7.—Because of the increased output without corresponding increase in size, alcohol engines should sell for less per horse power than gasoline or kerosene engines of the same class.

8.—The different designs of gasoline or kerosene engines are not equally well adapted to the burning of alcohol, though all may burn it with a fair degree of success.

9.—Storage of alcohol and its use in engines is much less dangerous than that of gasoline.

10.—The exhaust from an alcohol engine is less likely to be offensive, although there will be some odor, due to lubricating oil and imperfect combustion, if the engine is not skillfully operated.

11.—It requires no more skill to operate an alcohol engine than one intended for gasoline or kerosene.

12.—There is no reason to suppose that the cost of repairs and lubrication will be any greater for an alcohol engine.

13.—There seems to be no tendency for the interior of an alcohol engine to become sooty.

14.—With proper manipulation, there seems to be no undue corrosion of the interior due to the use of alcohol.

15.—The fact that the exhaust from the alcohol engine is not as hot as that from gasoline and kerosene engines seems to indicate that there

will be less danger from fire and less possibility of burning the lubricating oil. This is also borne out by the fact that the exhaust shows less smokiness.

16.—In localities where there is a supply of cheap raw material for the manufacture of de-natured alcohol, and which are remote from the source of supply of gasoline, alcohol may immediately compete with gasoline as a fuel for engines.

17.—If, as time goes on, kerosene and its distillates become scarcer and dearer, the alcohol engine will become a stronger and stronger competitor, with a possibility that in time it may entirely supplant the gasoline and kerosene engines.

18.—By reason of its greater safety and its adaptability to the work, alcohol should immediately supplant gasoline for use in boats.

19.—By reason of cleanliness in handling the fuel, and increased safety in fuel storage, alcohol engines will, in part, displace gasoline engines for automobile work, but only when cost of fuel is a subordinate consideration. In this field it is impossible to conveniently increase the compression because of starting difficulties, so that the efficiency cannot be improved as conveniently as in other types of engines.

20.—In most localities it is unlikely that alcohol power will be cheaper or as cheap as gasoline power for some time to come.

Stray Straws.

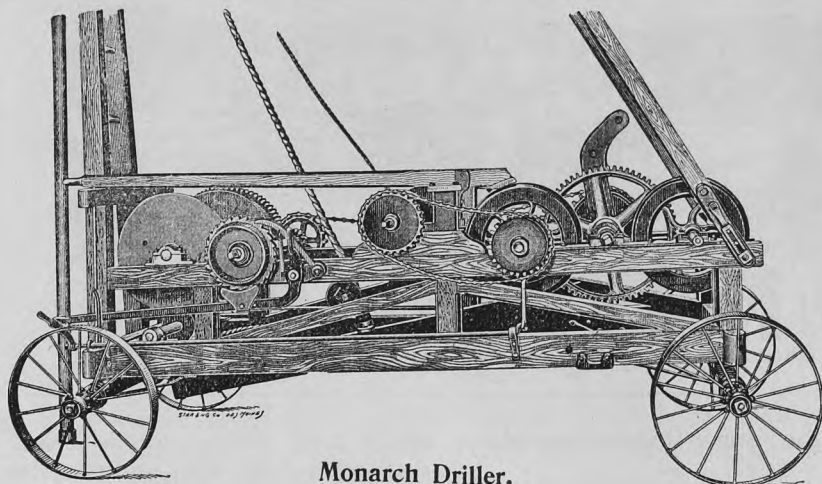
The report of railroad statistics for the last fiscal year has lately been presented to the Dominion parliament. The total number of miles of railway in operation in Canada for 1906 is placed at 21,353, as compared with 20,487 for 1905. But seventy-four miles of iron rails now remain as a relic of former days. Three thousand and seventy-one miles of railway were under construction at the close of the fiscal year, as compared with 1,066 on the same date of the preceding year. The total number of locomotives is placed at 2,931, and the grand total of all cars in use at 99,874. Of these, 91,015 were fitted with automatic couplers and 85,616 with air brakes. A loaded freight train of 250 tons, the comptroller of railway statistics point out, was probably the maximum in 1875, whereas loads of 1,500 tons are now frequently hauled over all the principal Canadian roads.

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To drill from one to thirty-five
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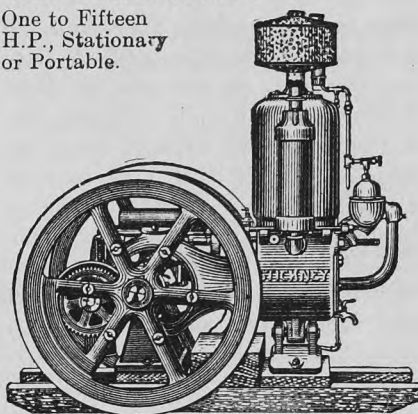
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Horse Powers, Grinders, Feed Cutters, Tanks, Pumps, Saws, Swings.

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H.P., Stationary
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Empire Cream Separators

Latest and best
Cleanest skimming and lightest running.



CATALOGUES AND PRICES ON APPLICATION

The Ontario Wind Engine & Pump Co., Ltd.,

Winnipeg, Man.

Statistics of traffic show 27,989,782 passengers carried last year, and 57,906,713 tons of freight. The number of passengers increased by over two and one-half millions, and the number of tons of freight by over seven millions, as compared with the preceding year. The total earnings of railways for the last year were \$125,322,865, as compared with \$106,467,198 for 1905. The percentage of operating expenses to earnings was 69.5, as compared with 75.2 for the preceding year.

The capital invested in Canadian railways has reached the large sum of \$1,332,498,704. To this capitalization the following contributions have taken place: Dominion government, \$194,188,584; provincial governments, \$43,278,022; municipalities, \$17,125,164; total, \$254,561,770. Included with these payments, however, is the cost of the Intercolonial and the Temiscaming and Northern Ontario Railway, government roads.

The reports of fatal accidents last year show a death list of 16 passengers, 139 employees, and 206 other killed in various ways, a total of 361, as compared with 468 in 1905. Only one passenger in 1,749,361 was fatally injured.

In respect to passenger traffic earnings, the report shows total earnings of \$33,392,188 for a total train mileage of 28,071,648, giving earnings per train mile of \$1.189.

In regard to electric railways, the report shows a total mileage at the end of the fiscal year of 813 miles. Ontario has 441 miles and Quebec comes next with 198 miles. Net earnings for the year totalled \$4,291,834. Twelve passengers were killed, as compared with thirty in 1905.

The following extract illustrates the rapid way in which towns spring up in the great Canadian West:

Govan, Saskatchewan, has been in existence since October, 1906.

There are now two general stores, a butcher shop, a baker, a confectioner, a barber, a blacksmith, two real estate agents, a restaurant, a boarding house, five agencies for the sale of farm implements, three livery barns, three lumber yards, and a splendid hotel in progress of erection which, when completed, will rank second to none on the Kirkella extension of the Canadian Pacific Railway. An elevator with a capacity of 40,000 bushels was built in January last, and opened on Feb. 18. It is now filled with wheat, as much as 5,000 bushels being received in one day. A Board of Trade has been formed to help the town along, and has already made its influence felt.

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SELLS LIKE SIXTY
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GASOLINE
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For Pumping, Cream
Separators, Churns, Wash
Machines, etc. **FREE TRIAL**
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GILSON MFG. CO. Ltd. Dept. E, GUELPH, ONT.



The Flour City Gasoline Engines

Stationary - Portable - Traction

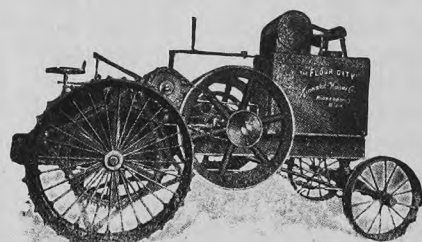
Our line is complete to 25 H. P.; a good proposition
for enterprising dealers

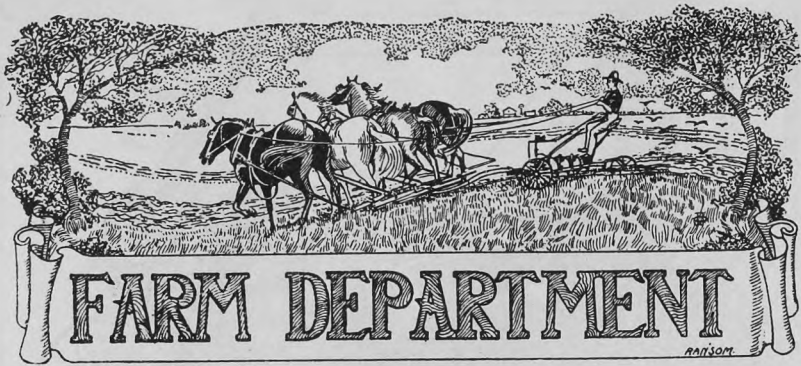
KINNARD-HAINES CO., MINNEAPOLIS, MINN.

PORTAGE IRON & MACHINE COMPANY, LIMITED

Portage-la-Prairie, Man.

Jobbers, Western Canada.





Shall the Farmer Invest or Speculate.

When times are good the man who has money is constantly on the look out for some place in which to invest his money in order to increase his capital. In times of depression, Wallace's Farmer in speaking of the matter gives some timely advice.

There is a marked difference between investment and speculation. Not all investments are safe, because all are not made wisely. The majority, however, are. The very reverse is true of speculations, and particularly of those speculations which are presented as investments on the basis of giving large returns.

No man is safe in giving advice even with reference to investments, for the reason that an investment that would be wise for one man might not be wise for another, and an investment that would be wise at one time might be unwise at another. It is always safe however, to advise against pure speculation, and especially if the speculation is on a margin, whether that be in farm products in the great markets, or in wild lands in a country with which one is not familiar, where the payment is on a small margin and for the purpose of selling it at an advance. There is not much money lost in buying anything for which there is a world-wide demand, provided you are paying for it in cash and can hold it until the world wants it.

It is a very dangerous thing for the farmer who is inoculated with the get-rich-quick microbe to go near a bucket shop, which are unfortunately to be found in every good sized city. He then becomes a lamb that will sooner or later be sheared. Some farmers have the bucket shop mania.

We once knew a gang of young fellows in a country town who became inoculated with the idea that they could make more money sitting around on store boxes and sending an occasional telegram than they could by working at some legitimate business. We told the boys that they would come to grief. They laughed at us; but we have every reason to believe that every one of them lost every dollar he put up, although in the first few deals they were considerable ahead. Usually if the market goes up the bucket shop breaks; and if the market goes down, you lose what you

put in. In either case it is, heads the bucket shops wins, and tails the farmer loses.

It is equally foolish to invest in mining stocks so generally advertised in the Sunday papers and, we are sorry to say, in some farm papers, but only in the poorer class. Mining is a legitimate business, but it requires large capital, large experience, large use of experts. Even millionaires who follow the business sometimes lose out, while it is a dead sure thing that the farmer will lose. Out of one hundred and fifty advertisements in a Sunday edition of one New York paper in the early years of this decade, all but one of the mines advertised were dead failures, and that earned dividends at the rate of but two per cent. per annum.

Why on earth should you give your good money to develop a hole in the ground where some fellow thinks there may possibly be gold or silver or copper? If it should prove to be a good mine, that is probably the last you will ever hear of it. If it proves to be a failure you are sure not to hear anything more about it, either. You will simply furnish another illustration of the old proverb, "A fool and his money are soon parted."

You will say: In what, then, can the farmer invest? Is the farm as well fenced as it ought to be? Is your stock as good as it ought to be? Have you all the conveniences that your wife needs about the house? You are safe in making investments in these things, provided, of course, you do it wisely.

Is there a piece of good land that you can buy without going in debt too heavily? Buy it. Good land in the western states will never long be a drug on the market. You say: What is good land? Good agricultural land, land that has a good black soil resting on a good clay subsoil, in a longitude where you have twenty inches of rainfall or more, and where you can grow corn, wheat, or alfalfa; or land which you can certainly irrigate, no matter where it may be located.

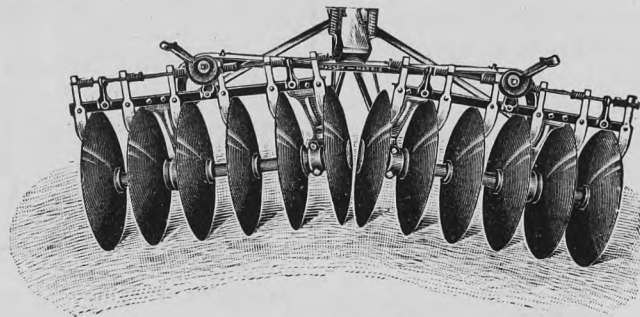
Wise investments of this sort will never beat a man badly. The price may fall—and no doubt will—but if you can hold on and pay out you will be all right in the end. Land that will pay four per cent. interest after paying taxes and keeping up repairs will beat a six per

FLEXIBILITY

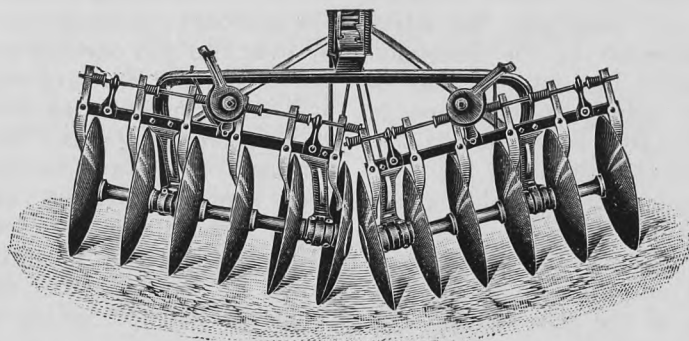
A Most Important Feature of
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DISC HARROW

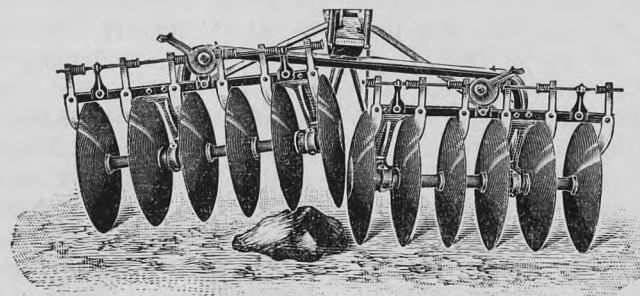
By means of our new Spring Pressure Device the inner ends of the gangs are held in working position regardless of the condition of the soil, and irregularities in its surface, resulting in thorough pulverizing of the entire surface of the field, and leaving the ground smooth and level.



On top of a ridge.



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Both Pressure Springs are controlled by the one lever, but are independent in their action.

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WHEN YOU BUY

If you want satisfactory results, if you want to be sure, insist on having a weigher made by the

Hart Grain Weigher Company

All the Thresher Companies sell Hart Grain Weighers because they are the best. What's the use of trying to find something new, when those who know, stick to the reliable Hart varieties. Don't tie yourself up with some experiment. It will likely prove expensive.

There is no excuse for getting on the wrong track when buying a weigher. The right track lies close at hand, (try the mail). It is cheaper, safer, surer and travelled by thousands each year, who know from experience that there are none better than the weighers made by HART GRAIN WEIGHER COMPANY of Peoria, Ill.

If you do not order at once, you are losing time, and time is money. Do not forget that the Thresher Companies are our agents and will quote you satisfactory prices both on weighers and repairs, which can be found on hand at all the large Thresher Centers.

Hart Grain Weigher Company

Peoria, Illinois

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cent. note, for the reason that population is increasing at the rate of about two per cent. per annum, and the value of good land in the west will increase over a term of years at least as rapidly as population. The money of the world is increasing, and for that reason prices will rise all over the world. The face of the note will not increase, but the earning capacity will decrease as interest grows cheaper; while the land will increase in value in some proportion to the increase of the wealth of the world, which is measured by the increase in the output of gold and silver.

The question will often arise: What is the best way to save small accumulations? We know of nothing better than a good savings bank under wise state laws and managed by men of whose integrity there can be no question. It is true that the rate of interest is low, and the increase seems mighty small; but the habit of saving is worth far more to a man than the interest of the accumulations.

Avoid a savings bank, and any other bank, that offers a high rate of interest for deposits; for remember that the offer of a high rate of interest in a settled country, where there are large amounts of money seeking investment, means poor security. In a new country, where the opportunities for profits are large and the amount of money seeking investment is small, a high

rate of interest is not a sign of poor security; but anything higher than the customary rate of interest means an increased risk.

Money hoarded in old stockings, or flour barrels, or an old tea pot, or a tin box in the cellar or the garden, is not well invested.

The Application of Barnyard Manure.

Every farmer knows or ought to know that if barnyard manure had no value other than that due to nitrogen, phosphoric acid and potash which it contained, it would scarcely pay for the trouble of handling it, hauling it to the field and spreading. Just think, a chemist could find in a ton of fresh barnyard manure but the value of \$1.39, the nitrogen being worth 45 cents, the phosphoric acid 42 cents and the potash 52 cents. At this rate it would be cheaper and easier to get the plant food in a commercial fertilizer because you would then know exactly what you were getting and the plant food would become immediately available, whereas when barnyard manure is applied to the soil it must decay before the plants can utilize its constituents. In this decay no small share of the nitrogen at least might be lost.

The great value of farmyard manure consists in the physical effect it has upon the soil. Over three-

quarters of the weight of the crop when harvested is made up of water, and, besides, when the crop is growing it dissipates through its leaves many times as much water as it holds in its substance. In fact, experiments have shown that the soil must furnish three hundred tons of water to the crop for every ton of dry matter removed in the harvest. Water, therefore, is the material most needed by the crop. This water must be all absorbed through the roots taken from the water in the soil. The water holding contents of the soil is therefore of prime importance. Now the water-holding content of the soil depends on two factors at least; one the size of the soil particles, the other the quantity of humus and decaying organic matter present. Dr. Kedzie showed that the addition to sand of one-twentieth of its bulk of dry, finely pulverized muck nearly doubled the amount of water which the sand would hold against gravity. Where barnyard manure is applied to a soil, therefore, it makes the latter spongy and able to hold much more water. Where to one-half of a certain field but eight tons of fresh barnyard manure was applied per acre, while to the other half nothing was applied except an equal amount of plant food in the form of commercial fertilizers, the first half of the field withstood a drouth and produced a full crop of potatoes. On the second half the

crop was but little more than half of a full yield because of the limitation brought about by the lack of water in part of the growing season. You see that it was not a question of the supply of plant food, but of plant drink, and that the plant drink was kept ready for the potato roots by the decaying manure in the soil. This leads to certain obvious conclusions.

In the first place the sooner the manure can be gotten into the soil the better because the more organic matter it will contain. The rotting of manure means a waste of organic matter. The chemist will say that the loss falls chiefly upon the carbon. Granted, but the carbon and its compounds are needed in the soil for the production of humus, for that slow decay which has to do with the water-holding content of the soil and makes profitable crops possible. Next, the very act of decay in the soil is useful in ways that we cannot understand, much less describe. The decay of organic matter is the work of bacteria, and the presence of these organisms in the soil seems to favor the growth of crops if the carbonic acid gas set free by them is not directly helpful to the plant in securing its food.

Besides this, remember that manure loses a good deal of plant food when allowed to decay outside of the soil. The venerable Dr. Roberts while at the Cornell University

found that 4,000 pounds of manure had decreased in weight to 1,730 pounds. Sixty per cent of the nitrogen had escaped into the air, three-quarters of the potash had been washed away by the rain, and practically half of the phosphoric acid had gone the same way. The corpse remained while the spirit had taken its flight. So when five tons of cow manure were similarly exposed, but in a compact pile, narrow at the top and wide at the bottom and well packed, with 300 pounds of gypsum mixed with it to save the nitrogen, 41 per cent. of that valuable constituent had gone into the air, and one-fifth of the phosphoric acid was washed out by the rains, notwithstanding the compactness and pyramidal shape of the pile. The gross weight had decreased from 10,000 pounds to 5,125 pounds. Some one says that he had saved the hauling of the 5,000 pounds of useless matter to the fields. Not so. This loss in weight meant the disappearance of the very organic matter needed to maintain the water-holding capacity of the soil. Every consideration points to the application of the manure as soon as pitched out of the stable.

No dairyman finds the proximity of the manure pile a help to the quality of the milk. As far as the cows are concerned the sooner the manure is removed and the farther the better.

No one claims that manure can be hauled to the field at all times of the year and under all conditions of weather. The effort should be made to have the proper place for the manure in readiness for it during the winter when the bulk of the manure is made in the stable. The fall and spring supplies may have to be housed in some suitable place protected from the rain, there to await the proper opportunity for hauling to the field. It is aside from the purpose of this article to discuss the characteristics of such receptacles.

A clover sod to be planted to corn in the spring is an ideal place for spreading manure. A timothy sod or, indeed, a field in any condition, to be planted to such gross feeders as corn or potatoes, is the proper place for spreading the manure during the winter, the earlier in the winter the better. Some experiments conducted at the Michigan Experiment Station, a good many years ago, demonstrated that there was little loss of plant food from manure spread on snow a foot deep on both level and hilly ground, the hills, of course, not too steep. Where the manure was put on an icy side hill there was considerable loss. The yellowing brown water flowing over the surface from this rather heavily manured field indicated a somewhat serious loss, but the chemist found that this loss was more apparent than real. So great is the avidity of the land for plant

food that where water containing it flows over a hand's breadth of exposed soil this plant food seems to be absorbed. Just how far this absorption takes place has not been fully demonstrated.

Certainly for corn and potatoes if not for other crops, the manure should be plowed under, since this method mixes it most thoroughly with the soil and gets it into the position where its decay will do the most good. Top dressing means manure rotted in the compost heap. This is all right for garden vegetables where the cost of the manure cuts little figure in proportion to the value of the crop. For the average farmer, if there be such a man, the safer plan is to plow under all the manure possible, not too deep of course, but to get it under the soil to decay there.

Again, some ambitious people would think it wise to apply 20, 30 or 40 tons of barnyard manure to the acre on a small part of their farm, and let the rest go bare. This is a mistaken idea from start to finish. If the quantity of manure is limited, spread it over more ground and put on but 10 or at most 12 tons to the acre. Larger quantities supply excessive amounts of the plant food for ordinary crops. Better manure the ground oftener and less heavily.

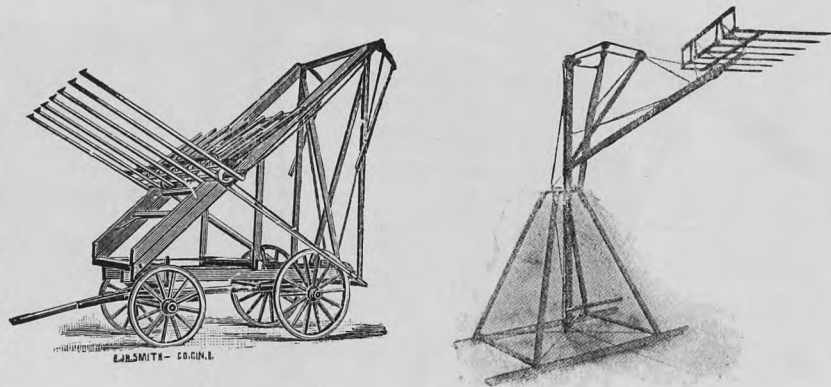
In agriculture "new occasions bring new duties, time makes ancient good uncouth," the requirement to spread the manure thinly implies something impossible a generation ago, namely, that it shall be spread evenly. Experiments today are wanting to exhibit the losses accruing from throwing the manure at the land in chunks. If manure is hauled out in the dead of winter and scattered from a sleigh box it is sure to be left in large forkfuls scattered unevenly. It is impossible to get manure, so applied, properly worked into the ground to insure the mixing of the decaying organic matter with the soil. Remember that if the decaying manure is not mixed with the earth while its content of plant food will be adsorbed, it cannot exert its beneficial effect on the physical character of the soil. A man of experience is tempted to say that one load of manure spread with perfect evenness is about as valuable as two loads on the same area spread in chunks and heaps. This phase of the question cannot easily be exaggerated. Until the manure becomes an unrecognizable constituent of the soil itself it has not accomplished its mission. It must be digested into the soil, and this is possible alone when it is evenly and uniformly spread.

The Plow as a Farm Implement.

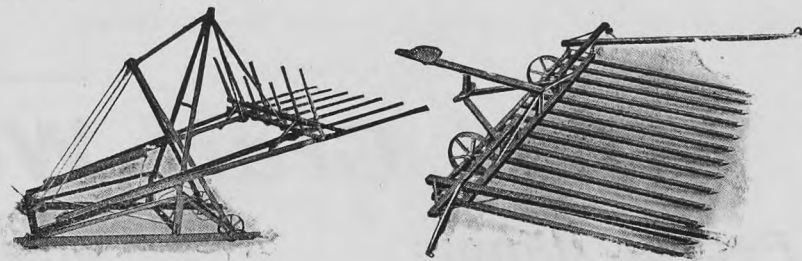
The plow naturally comes first in the list of farm implements, and demands the most attention. Its function is to penetrate, break up and reverse the firm surface of

DAIN HAY TOOLS

Have no equal for handling large quantities of hay quickly with little labor. Their time and labor saving features have won for them the enviable position they occupy, for being the best hay tools on the market.

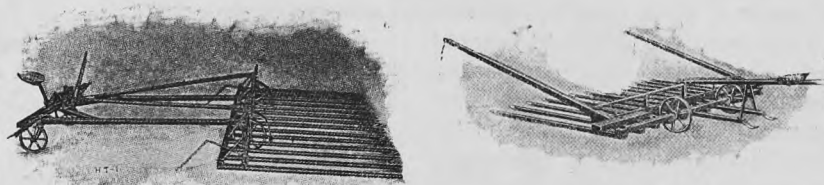


They are simple and easy to operate, no previous experience is necessary to secure satisfactory results.

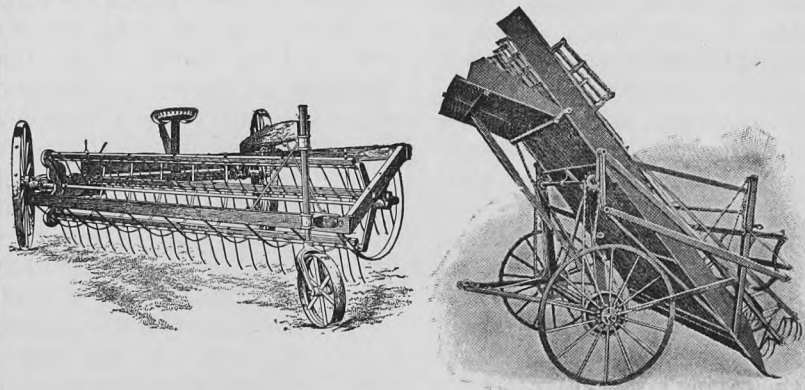


Our line comprises such a variety of styles that from it may be selected tools especially adapted for your particular use.

Dain Tools are carefully built of first class material and are durable and dependable.



It is to your interest to get full information regarding Dain Hay Tools before buying elsewhere.



If you will write us saying you are interested in a Stacker, Rake, Loader or Side Delivery Rake we will give you full particulars. Don't hesitate, write to-day.

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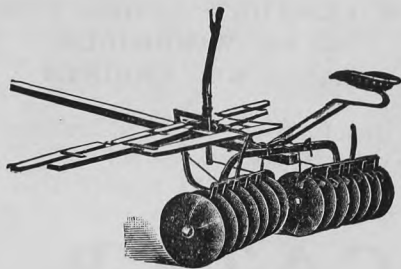
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"BISSELL"

Ask any farmer who has used one and he will tell you that the BISSELL is the most evenly balanced, does better work and draws lighter than any harrow he ever used.

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With the **BRANTFORD** Line of Carriages **Speaks only of merit. Can You Afford to be Without One?**

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Ask an Owner

20 H. P. 40 MILES AN HOUR. 5 PASSENGER.

JOSEPH MAW & CO., LIMITED, Winnipeg, Canada

the field. Although draught is important, economy of time and efficiency of result are the most valuable factors in a plough. The suitability of a plough for any purpose depends upon the nature of the land and the kind of work it has to do. Any plough to be efficient must thoroughly invert the soil, covering all stubble, weeds, or manure and leave a new surface exposed to the air.

In its action of cutting and turning over the earth, the friction is entirely a sliding one: the character of the material employed in constructing the plough, the finish imparted to it, and also the form given to the parts, are very important features in determining the force required to perform the work. It is in respect of these parts that most of the improvements in this style of implement have been made. It follows, then, from what has been said as to materials used in construction, not only on the score of economy alone, but on account of ease of draught by decreasing friction, that all wearing parts of ploughs, instead of being made of cast iron left in the rough state as it comes from the mould, should be of chilled steel, tempered and highly polished. This improves their scouring qualities and greatly reduces the draft necessary to operate them. The addition of wheels also contributes to decrease the resistance, and consequently the ease in draft, requiring considerably less strength and skill to hold it to its work.

Speaking broadly, ploughs may be classed as those having long-breasted or mould boards, with a gradual turn, and those having short-breasts and a fairly sharp turn. In a general way it may be said that those having long-breasts will cut an unbroken rectangular furrow, while the short-breasted will produce a broken, pulverized slice having no angle. The reason

for this difference is very simple. In the long-breasted ploughs, after the slice has been cut off by the coulter and share, it is very gradually raised on one side and gently pushed over into its place by the curved-over end of the mould-board. The curves of the breast traversed by the cut furrow are so long and gradual that the bending does not cause any breaking or cracking of the slice, and it is laid over whole in the same condition as it is cut.

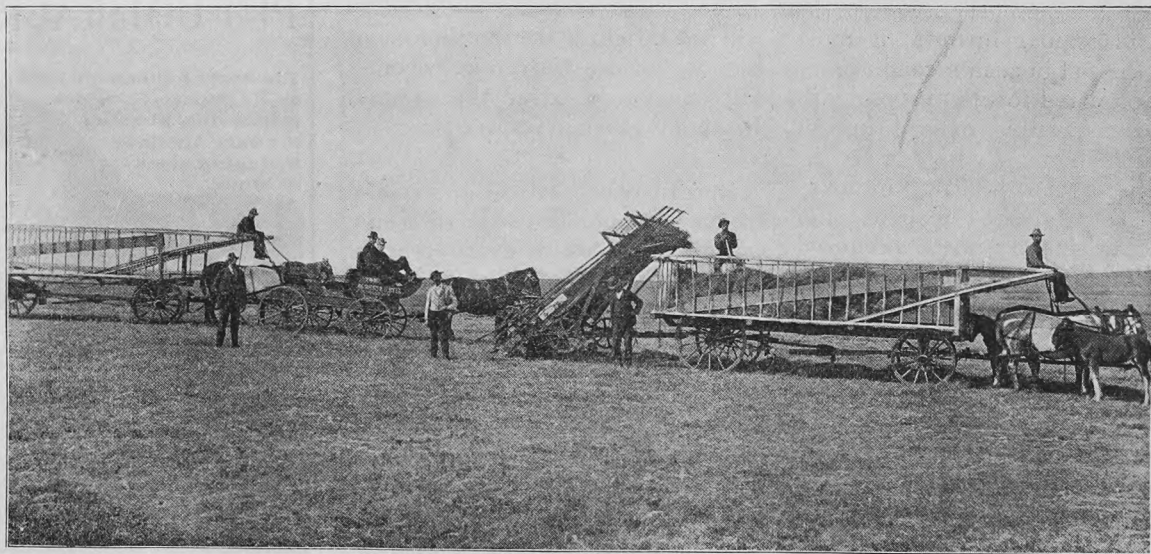
In the short mould-board plough the same amount of curving and bending is compressed into about half the distance, with the result that the cut-off furrow is first of all bent abruptly upwards, and as the

running across its width. The furrow having now reached its highest point is just as suddenly bent over away from the plough, with the result that it is again broken by cracks running along the length of the furrow. This thoroughly broken up soil falls into its place in a remarkably good tilthy condition. These results can invariably be secured by using suitable ploughs in a soil in good condition for ploughing, but cannot always be obtained under all conditions.

Every short-breasted plough will not necessarily produce the best result. The common digging plough has short enough breast and the rapid upward turn of the front will break up the furrow to a consid-

sharp enough, is for the furrow-slice to be left standing on edge when it is damp, or for the soil to simply fall off behind without being turned over at all when it is dry.

These pulverizing ploughs demand very different setting from the ordinary long-breasted kind. They will "float" as evenly and as easily as it is possible for any plough to do. But the ordinary long-breasted plough will do most efficient work when it turns a furrow about one and a half times as wide as it is deep. With any plough the furrows are laid more evenly and with the greatest regularity when it is slightly wider than the cut of the shear, for the uncut portion acts as a hinge upon which to turn the fur-



A Haying Outfit in Alberta.

surface in contact with the breast has to travel over greater space than the upper surface, there is a tendency to split the furrow into horizontal layers. As this turning upward continues, the bending becomes too rigid for the process, and the slice becomes broken with cracks

erable extent, but the hindermost part of the wing does not, as a rule, turn over sufficiently towards the ploughing to effect the final breaking up of the furrow and to lay it in its place upside down. The tendency of the short-breasted plough whose turns up and over are not

row and prevent the curved breast from throwing it too far over towards the ploughing. Particularly so is this the case with the short-breasted plough, for the sharp upward and outward turn of this plough tends to throw the slice away from the plough before it is

properly broken, and unless the furrow slice is held in this way until the final bend breaks the hinge and drops it into its place, untidy work is the consequence. The width of this uncut part should not exceed half the depth of the furrow. When the soil is dry and hard even the long-breasted plough will produce a somewhat broken furrow, and when the land is wet and dough-like, the most suitable short-breasted plough will fail to pulverize the soil properly; but given ordinary conditions such as are suitable for ploughing, results as stated may be looked for.

On a light sandy loam, the condition of the turned-up surface matters very little if the covering in is effectually accomplished, for whatever the shape of the furrow it is always porous and easily brought to a fine tilth. Should there be any particular conditions required on this class of soil, it is that the furrows be tightly pressed together so that there shall be no intervening spaces and that the soil shall not lie too loosely. To secure the necessary pressure of the soil, it needs only to have a plough with a long breast, which shall be adjusted at an angle sufficiently wide from the line of the beam so that the tail end of the breast shall be close to the ground with a considerable curve towards the ploughing. The effect of this arrangement is that the newly cut slice is pushed up tightly against the others and as the breast slides over it, presses the furrow firmly down; but consider for a moment the effect of this squeezing and pressing upon a soil inclined to be wet and sticky. It would render the surface in such a condition that no amount of harrowing would ever produce a reasonable tilth. We may conclude, then, that the plough should be a tillage implement; that upon any but the very lightest soils it must do more than invert the earth in regular furrows; it must leave the soil in such a condition as to be prepared for its purpose with the least possible expenditure of time and labour.

Much of the difficulty in managing short-breasted ploughs, and the unsatisfactory work produced by them, is invariably due to want of thought and precaution in setting them or ignorance as to the construction of the implement. These ploughs face the work in such a very different way from the more common shapes that they require totally different setting, and unless the operator understands the construction of his plough, he creates much needless draft, more work for himself and horses, and gives an untidy appearance to the ploughing.

Farm Notes.

In estimating the profits of producing a crop, the soil fertility removed, the market price, and the labor required in production, should all be considered.

Keep busy now—go fishing later.

Wonder if wheat will really go to a dollar?

When a farmer loses interest in seeing things grow it is time to get off from the farm if not off from the earth.

Did you treat your seed grain for smut before you sowed it? If not the late spring will likely bring you a smutty crop.

THERE is nothing that is more likely to interest the boy in the farm than the rearing of colts. There are great possibilities in the growing colt, and a boy with gumption may be trusted to bring them out.

"For what is July 25 noted?" asked the teacher of the history class.

The freckle faced boy with the faded hair raised his hand.

"You may answer, Reuben."

"It's the day to plant turnips."

Farmer: One of our neighbors raised a pumpkin last fall that was so large that he hollowed it out and used it for a dog house.

Cityman: That's nothing. Not long ago, in our town, I saw three cops asleep on a single beat.

The appointment of Mr. James Murray, B.S.A., as superintendent of the Brandon Experimental farm, was a choice well made of a man who deserved it. Mr. Murray is devoting his time and energies to Western Canadian agriculture in such a manner that he needs no introduction to our readers.

The late spring has undoubtedly seen a lot of grain disked in on ground that was not plowed. This will be all right if the weather is not too dry before the grain becomes tall enough to cover the ground. Disking is also bad for weeds.

Record every article of expense from a spool of a thread to threshing machine. Likewise every cent of the daily sales from a pint of milk to a pig or cow. Foot up the columns at the end of each month. Know what your expenses have been and what your income is.

Thousands of dollars' worth of farm machinery is now being shipped into the country that will never again be protected from the weather.

This exposure means an appalling financial loss to the farmers, since it reduces fully one half the period of usefulness of an intricate machine.

When buying your new implements, promise yourself that you will provide them shelter and the best of care. Make your arrangements for housing before you purchase. Summer rains are as destructive as winter snows.

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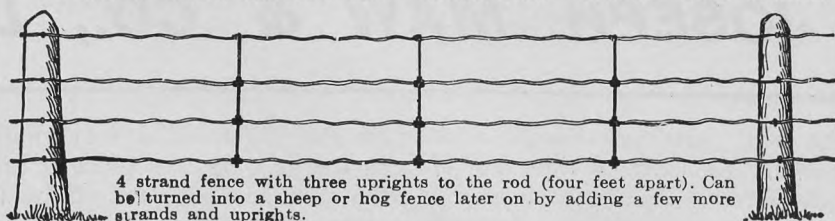
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Our "Majestic" is a specially designed Hog and General Purpose Fence.

When writing for prices, state for what kind of stock required.

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Will Build a Stack 20 Feet Wide by 50 Feet Long, 25 to 30 Feet High. Made in 3 Sizes.



Field view from photo on D. R. Love's farm, Falmouth, Ills., with Fleming Automatic Swinging Hay Stacker and three 3-Wheel Rakes. Put up 145 acres of heavy hay in seven days. Stacker will elevate hay 22 to 30 feet high, and will build a stack 20 feet wide and 50 feet long.



This Rake is built 12 ft. wide and has 14, 7 or 8 ft. Metal-pointed Teeth, Sliding Steel Seat, 16 or 20 in. Drive Wheels, Stiff Tongues or Hinged Tongues as desired.

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Agents wanted in unrepresented districts.

FRED W. PACE,
Superintendent.

in Canada, the bulletin states, have sought by selection and management to develop the form and quality of the animal looked upon with favour by the packers and to some extent they have been successful.

The Poland-China and Duroc-Jersey have during the past ten years grown less and less popular in Canada, according to the author of the bulletin. In 1906 only eight members of the Dominion Swine Breeders' Association bred Poland-Chinas and three bred Duroc-Jerseys.

With the description of each breed is published a scale of points by which, with the illustrations of typical animals, a valuable service is afforded in teaching the correct ideals to be looked for in selecting breeding animals. The author of the bulletin is Mr. J. B. Spencer, B.S.A., who has in this work presented a systematic study of swine that should be highly appreciated not only by students of animal husbandry but by swine raisers in all parts of Canada. Copies of the bulletin are obtainable by applying to the Live Stock Commissioner at Ottawa.

Making Butter.

Butter making is so general that most people think there is little to be learned regarding it, but the making of a high grade of butter is a very difficult matter. Cleanliness first, last, and all the time, is positively necessary. The stables must be clean, light and airy. The cows healthy, well groomed, and their feed of the best quality. The milk-er should be very careful that no foreign matter contaminates the milk in any way. As soon as it is drawn, it should be strained through four thicknesses of cheese cloth and run through a cream separator, the cream being heavy enough to make a pound of butter from a quart and a pint of cream. This should be cooled immediately in a bucket with a perforated lid, to a temperature of about 50 degrees, Fahr. Great care must be taken to have all the animal heat removed before it is put in the cream can.

Sal soda should be used in washing all dairy utensils, after which they should be scalded and sunned every day. Be sure that the separator is taken apart and washed after every milking.

When sufficient cream has been gathered for a churning, the shorter, the time the better quality of butter having been kept perfectly sweet, it should be set in a large vessel of boiling water to warm. This can be done by using a lard can and setting it in a large dish-pan of water on the stove, and stirring continually until the temperature reaches 72 degrees, when it must be removed quickly and set to ripen where the temperature of cream will remain the same for twelve hours. Then it will be thick and ripe. Cool to 62 degrees and churn

in a churn without inside fixtures. As soon as the butter breaks into grains the size of wheat, draw off all buttermilk and put in a bucketful of moderately cold water and give a few turns to gather the butter. Take out and weigh, adding one ounce of salt to every pound of butter. Put on lever butter-worker which has been previously scalded and cooled with water. Mix salt thoroughly with rolling and turning motion, never stroking or slicking, which will spoil the grain. Cover neatly and leave stand several hours in cool room, and when it can be worked sufficiently as not to be mottled and then printed in pound prints with the name of the maker on each one. The print should be scalded and left in cold water before using. Wrap each print neatly in butter paper, after which it can be placed in butter carriers ready for the market. In summer ice can be added in the zinc box, but should never be placed on the butter.

Our butter was judged in the exhibit of the Pennsylvania Dairy Union and scored perfect in color, grain, salting, and package. We had no trouble to get five cents more than market price from private customers in our home town. Our herd being registered Guernseys, the butter was naturally of a golden tint, but when necessary we add color sufficient to give June tint. The salt should be perfectly pure, and great care must be taken to have nothing with any odor come in contact as the butter will absorb the taste very readily.—Farmers Guide.

Milk Fever.

Milk fever usually makes its appearance in from twelve to seventy hours after calving, and the sooner after generally the more severe the attack. The first symptom is that of restlessness, which is usually passed unnoticed. This is followed by excitement in which the animal stamps her feet, throws her head and has a wild appearance in her eyes, with dilated pupils. The cow may also bellow at times, and if the calf is present in the stall she will pass it unnoticed. These symptoms give way to muscular weakness in which the animal staggers, loses power and falls to the ground. Efforts to rise become less and less effectual until she sinks into the deadly stupor so common to the disease. The udder, which a short time before was full of milk, is now soft and flabby to the touch. It contains little or no milk. The pulse is quickened, but weak and may be almost imperceptible. The cow assumes the position peculiar to the disease, that of lying on her breast bone with her head thrown well around to one side.

In treating milk fever the most common method used is inflating the udder with air. First of all, see that the cow is placed in an open field or lot free from dust and in the

From the Cow to the Pail--From
.. the Pail to the Cans of the ..

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We test every can of cream separately and guarantee our tests to patrons, and any farmer wishing to do so, may have the Dairy Superintendent call at our factory, test his cream and send him an official test of same.

Ship us a few cans of cream on trial, so that we can show you how satisfactory are our methods of doing business.

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WINNIPEG - MAN.

presence of bright sunshine. The air of filthy or even moderately clean stables where other animals are housed is known to be highly contaminated with bacteria, and such air if introduced into the udder will produce inflammation of the glands. The cow usually flounders around during her delirious efforts, but can be kept in position by propping her up with bags filled with hay or straw, which are also valuable in preventing injury to the animal. The arrangements for inflating the udder consists of a milking tube, a chamber containing sterilized absorbent cotton (through which the air is filtered), a rubber bulb and tubing. The tubing, milking tube and cylinder should be thoroughly cleansed by placing them in boiling water for at least fifteen minutes before using. Prepare a 2 per cent. solution of carbolic acid and wash the udder and teats clean. Then place a clean boiled towel under the udder to prevent it from coming in contact with the dirt. Now take the tubing, attach it to the bulb and to the other end attach the cylinder. Another piece of tubing, with the milking tube inserted in one end, is now attached onto the free end of the cylinder, and the apparatus is ready for use. Do not crowd the cotton into the cylinder too tightly, as it will prevent the free filtering of the air through it. Without milking out the udder introduce the milking tube into the teat, and by working the bulb fill the corresponding quarter with air until it is well distended and tense. Remove the milking tube and tie a tape around the lower end of the teat to prevent the escape of air. Dip the milking tube into a clean carbolic solution before inserting it into another teat and then proceed as before until each quarter has been treated and is equally dilated.

Nothing more can be done now but keep the cow in position. If in two hours she fails to show signs of recovery, repeat the treatment as often as the slackness of the udder will permit until the cow rises to her feet. Passing of feces or urine is a good sign of recovery. The cow should not be milked for fully twelve hours after treatment, and only partially milked out for several days. She will not show much sign of hunger, and when she does a little hay and tepid water may be given her. Do not feed any concentrated food for at least forty-eight hours or more, but let her diet for some time be more of a laxative nature and give her all the good spring water she will drink.

As a preventive measure in cows subject to this disease, avoid getting them in high condition previous to the time of calving. A cow that is a heavy milker should be compelled to take daily exercise before calving time, and her food should be restricted and of a laxative character previous to this time. It is also

practicable to give a dose of Epsom salts (one to one and one-half pounds) a few days preceding the parturition period and a similar dose following the act. Good authorities claim that the number of cases of milk fever have been greatly lessened by only partially milking the cow out for a few days after calving. —Iowa Homestead.

Cleanliness in the Dairy.

The first requisite is to purchase dairy utensils that can be easily cleaned, which have smooth, hard, and nonporous surfaces, and corners so made that they are easily accessible to a brush or cloth. Unnecessary corners and angles should be avoided.

Wooden utensils should never be used for receiving milk, as wood contains myriads of small pores which retain milk, making it impossible to clean such vessels thoroughly.

Glass and earthenware have sometimes been used and are very efficient, but, on account of their expensiveness, the ease with which they are broken, and their great weight, they are impractical for dairy use.

Tinned metal complies most nearly with all requirements, and is the cheapest and most practical at the present time. However, the metal should be of good quality and heavily and smoothly tinned to avoid bare iron spots, which are liable to corrode and become rough, thus serving as breeding places for bacteria. It is not deemed wise to use galvanized iron, zinc, or other rough-surface metal.

All joints, corners, seams and crevices should be made smooth and filled entirely with solder. Prest tin or seamless utensils are preferable from a sanitary standpoint. Milk pails in particular should have no corners, so that there will be no places for bacteria to grow. Strainers and aerators should be made likewise smooth and with as few projecting nuts, rods, or braces as possible. Storing or delivery cans, dippers, and other utensils must also comply with this rule. A new piece of strainer cloth should be used at each milking.

The principal things necessary for keeping utensils clean are hot water or steam, some alkali, a scrubbing brush or a coarse cloth, combined with plenty of elbow grease to make these agents effective. All utensils should be cleaned immediately after using. The method for cleaning varies slightly according to what the utensils have contained. If they have been used for milk, they should first be rinsed with cold or lukewarm water so as to wash off the viscous albuminoids, which if subjected to boiling water would coagulate and adhere firmly to the tin, thus becoming difficult to remove. They should then be thoroughly washed in hot water with some cleansing material, such as washing powders or caustic soda, in order to

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117

remove the grease. The water should be quite hot and the washing powders should not be used sparingly, for we too often find vessels where the grease has not been removed, but simply smeared over the tin. Caustics and washing powders are not only effective in cleaning the grease from utensils, but they also act as a means of destroying bacteria. Common soaps, and especially if perfumed, should be avoided. After the washing, utensils should be treated differently according to conditions. If steam is at hand, a thorough steaming should follow, steam being the cheapest and most effective agent for destroying germs in creameries, cheese factories, and large dairies. Since the production of steam requires a boiler, which is quite expensive for the average dairy farmer, it is necessary in his case to pursue a different course for destroying bacteria.

It has been found that a 5 or 7 per cent solution of good fresh washing powder applied in hot water will make a good material for destroying germ life, provided the utensils are subjected to this solution for at least 10 minutes, after which they should be rinsed in hot water and set away in the pure air to dry. The latter method requires more time to accomplish the same purpose than with steam, but is better adapted for farm use.

There are other methods for conveniently destroying bacteria on dairy utensils; they are, however, more expensive, but very effective. A practical way is to rinse the utensils, after they have been thoroughly washed in some alkali, with a hot solution containing 6 to 12 per cent. borax. This solution also preserves the tin to a slight extent, but care must be taken not to get it into the milk.

Sunlight and pure air are the cheapest and most effective means of keeping the utensils pure and sanitary after they have been cleansed. Where these conditions do not exist, it is then advisable to put them in a hot drying room.

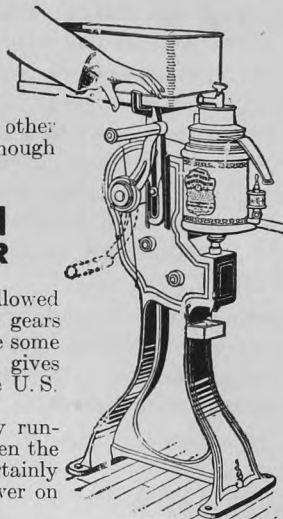
Old unclean dishcloths should never be used for wiping dairy utensils after they have been steamed or subjected to the hot washing solution, as the germs which are lodged in the cloth will be again distributed over the surface of the vessels, thus reinfesting them. If utensils must be wiped dry, it is always best to use a coarse linen cloth which has previously been steamed or boiled.

Scrub brushes are the best articles for use in cleaning dairy utensils. Coarse linen cloths may also be used, but they require more care in keeping them clean. The same methods for cleaning utensils should be followed for cleaning cloths.

CLEANING CREAM SEPARATORS.—It is stated that "the hand cream separator is probably the most complicated piece of apparatus used in the dairy, and hence most likely to be the greatest source of contamina-

How the U.S. Starts Itself

The crank was raised to the height shown and had just been released as this photograph was taken. Now if another photograph had been taken about a minute later the crank would have been seen hanging down as shown by the dotted lines. In other words, the slight weight of the crank is enough to start the gears and bowl of the

**U. S. CREAM
SEPARATOR**

If the crank was raised enough times and allowed to lower itself each time it would get the gears and bowl going very fast. This would take some time, so of course it is not practical, but it gives you an idea of how lightly and easily the U. S. Separator runs.

Other separators are advertised as "easy running," but the U. S. is easy running. When the weight of the crank will run a U. S. it certainly is easy running and can't take much power on the part of the operator to turn it.

Grant Park, Ill., Mar. 26, 1907.

We are pleased with our No. 6 U. S. Separator. I have a little boy 8 years old and little daughter 11 years old that often turn my machine with perfect ease. My wife who is a small woman, weighing about 120 pounds, runs my machine about one-third the time since I bought it.

Henry Wille.

We haven't room here to tell you about the fine and accurate construction of the parts that makes the U. S. so light running, but our handsome new 1907 catalogue No. 40, contains the whole story, with many pictures that speak for themselves. Let us send you one right away. It's worth reading, and when you get through you'll know ALL about the U. S. Separator "from A to Z," inside and out. Anyway, don't buy a separator till you read it. Just say: "Send 1907 Separator Catalog No. 40." Write today

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tion of milk." In view of this and the further fact that the use of cream separators on the farm is rapidly increasing, the Kansas Station undertook experiments to determine the extent of contamination which results from the several methods of treating the cream separators as advocated by separator agents and practised by farmers. In these experiments tests were made of the relative cleanliness of various methods of (1) flushing out the bowl with water and (2) thoroughly washing cream separators.

The experiments were made with three separators of average size in common use in Kansas. The conclusions reached were as follows:

A cream separator should be thoroughly washed every time after using. A brush should be used on every part and piece, using 5 per cent solution of borax or other good washing powder. Rinse in hot water, or steam if possible. They should then be left to dry while hot. Wiping with an ordinary clean cloth contaminates utensils with innumerable bacteria.

The bacterial contamination in milk is increased from three to five times by running it through a separator bowl which has been used and only flushed and left standing several hours. If only flushed while using for several days, the contamination increases several times more, and such milk would be likely to be detrimental if fed to calves.

The use of washing powder in flush water reduces the number of bacteria in the following batch of milk that is run through, and cleanses the separator more than hot water alone, but not sufficiently to warrant that method of cleaning.

The use of a cream separator that is thoroughly washed reduces the number of bacteria in milk one-fifth to one-fourth.

Improper cleaning is detrimental to a separator on account of the rust that accumulates on dirty or damp places. This may shorten the life of the machine many months, depending on the degree of cleanliness employed.

Running milk through a dirty separator is similar to running it through a dirty strainer, with all the filth of the previous milking left in it from twelve to twenty-four hours. The millions of undesirable bacteria from the dirt, manure, and slime lodged in the separator bowl spoil all the milk, to a greater or lesser degree, that passes through the machine.

When properly used, a cream separator is a clarifier and to a certain extent a purifier of milk, but when carelessly used it is a source of filth and contamination.

How One Farmer Made \$1832.50 Clear Profit from Seven Cows In One Year

Is the title of a neat little booklet issued by the Vermont Farm

Machine Co., of Bellows Falls, Vt., makers of U.S. cream separators. The booklet contains two addresses on "Why we should dairy," and "My experience on a ten acre farm." Both are full of facts and figures, and are well worth reading by any man who keeps three or more cows.

It is a valuable little handbook for any farmer's library, and will be sent free providing you write the above firm, mentioning The Canadian Thresherman and Farmer.

Hoofs and Horns.

THE horse that is allowed to go too long with old shoes is liable to contract corns and other foot troubles.

ONE of the most important things on the farm is the care of the work team.

CARROTS fed in the spring are a wonderful blood cleanser for horses.

A GOOD dairy cow is one that thrives rather than one that takes on fat quickly.

KEEP the pigs growing as the most profit is in the first hundred pounds of weight.

ANYBODY can turn the handle of a cream separator but it takes a smart man to get the milk to put into it.

LIGHT hogs for bacon are in good and increasing demand. They make good meat, and are more healthy than the excessively fat ones often seen upon the market.

TRY some fly poison on your cows this summer. It will pay you well, judged from the standpoint of the extra milk secured. Then besides think of the comfort to the animals.

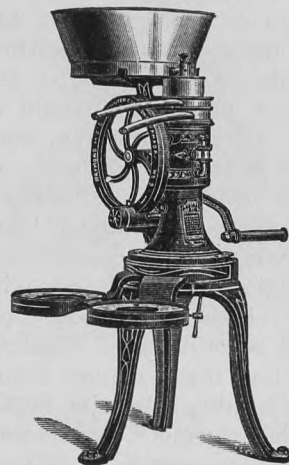
It is not good economy to buy light milk pails or pans or cans. Get good, heavy tin ones. They will last much longer and pay in the end.

A GOOD change in the horse's ration is to give him once each week a big, warm, well steamed bran mash, combined with a pint of flaxseed jelly and one pint to one quart of molasses.

NEVER tie the bull by the nose-ring, either in the stable or outside. It toughens the nose abnormally in time, so that all the claimed advantage of leading him by that naturally sensitive member is lost. Then, too, there is always the possibility that the ring may be torn out by some quick movement, a serious accident for the attendant as well as for the bull. If a ring is used at all, it should be only as a safety-brake and not as a general snubbing-post for every-day occasions.

There is a good reason why National Cream Separators

Are acknowledged by Dairymen, Farmers, and those who know to be the favorite, because



They Skim Cleaner
They Turn Easier
They Last Longer
They are Easier Cleaned

than any Separator on the market. Send in for our catalogue on Separators and butter making; it will tell you all about both.

Raymond Manufacturing Co., Ltd.

324-6 Smith Street

Winnipeg

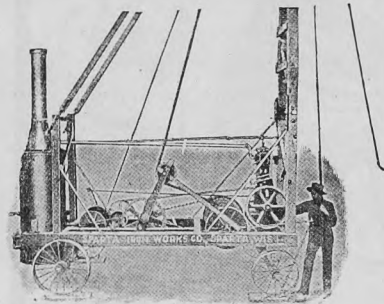
Makers of the Celebrated Raymond Sewing Machine.

WELL DRILLING MACHINERY

Rock Drilling and Hydraulic Jetting Machines equipped with either Steam or Gasoline Engines on Farm Trucks or as Steam Traction Outfits.

If you will write us for our free illustrated Catalogue we will show you that we can make you prompt delivery from Canadian Warehouses of any style of Machine you may wish.

Local Agents wanted.



SPARTA IRON WORKS COMPANY

SPARTA, WIS., U.S.A., and REGINA, SASK.

CHAPIN & CO., CALGARY

General Agents, Alberta.

The Empire Proves Its Claims

The cream separator of Quality—Quality in work and quality in construction—is the

Improved Frictionless

Empire Cream Separator

In construction it is admittedly the simplest in principle. Its bowl is the lightest and turns the most easily. It is free of all complicated parts and is most easily washed. Its improved bearings make it as nearly absolutely frictionless as it is possible for a machine to be.

It is so well built and made of such good materials that it outlasts three or four ordinary separators, and very seldom needs repairs.

It gets all the cream and of the highest quality.

In convenience, in economy and in satisfaction, it is emphatically the Separator of Quality.

We Prove These Things. We don't ask you to take mere "claims." We give you proof. Send today for our new catalogue. It is well worth your while to find out about the Empire.

**Ontario Wind Engine and Pump
Company, Ltd.,
Winnipeg, Manitoba,
Canada.**



Building Operations in Canada During 1906.

According to the "Labour Gazette" for March the great extent of building operations in Canada during 1906 constituted one of the most noteworthy features of the year in connection with industrial and labour conditions. Accompanying the marked expansion which took place in commerce and industry, the number and value of buildings erected and enlarged was considerably greater than in 1905, the returns for which in turn exceeded those of any previous year. While the conditions contributing to this result were general in scope, the increase was most pronounced in the case of the larger cities and in the North-west provinces, where the influx of population and the progress of settlement and of industrial development were more marked than elsewhere. A statistical return with reference to these conditions throws an interesting light not only on the amount of employment rendered immediately available during 1906 to workmen engaged in the building trades and in the manufacture of building material, but on the nature and scope of general industrial development in Canada during the period named.

During the months of January and February, 1907, a special investigation was conducted by the Department of Labor, with a view to obtaining statistical information as to the nature and extent of building operations during 1906 in the several cities of the Dominion. Returns were obtained, wherever available, of the number of permits issued in the several municipalities and of the declared valuation of the buildings represented therein, the statistics being further classified according as the work was in connection with the buildings or repairs. In the cities in which no system of issuing permits was in use, returns based on estimates prepared by local architects, building contractors and others in a position to furnish reliable information, were secured.

Detailed information was obtained by the Department with reference to building operations during 1906 in 41 cities of the Dominion, an estimate of the total value of the buildings erected being obtained in each case.

The total value of buildings erected in these cities was \$58,140,294. Of this total the City of Toronto, Ont., contributed \$13,160,398, being the locality in which building was most active in 1906. The City of Winnipeg, Man., stood second with a total of \$12,760,450, Montreal, Que., third with \$8,600,300, and Vancouver, B.C., fourth with \$4,233,910. The remaining cities in which the value of building during 1906 exceeded \$500,000, were: Port Arthur, Ont., \$2,894,760; Hamilton, Ont., \$2,124,815; Edmonton,

Alta., \$1,869,069; Ottawa, \$1,728,975; Calgary, Alta., \$1,482,984; London, Ont., \$1,200,000; Fort William, Ont., \$1,152,240; Moosejaw, Sask., \$843,221; Brandon, Man. \$748,672; Victoria, B.C., \$699,300; Halifax, N.S., \$688,315; Peterborough, Ont., \$615,000; and Belleville, Ont., \$600,000.

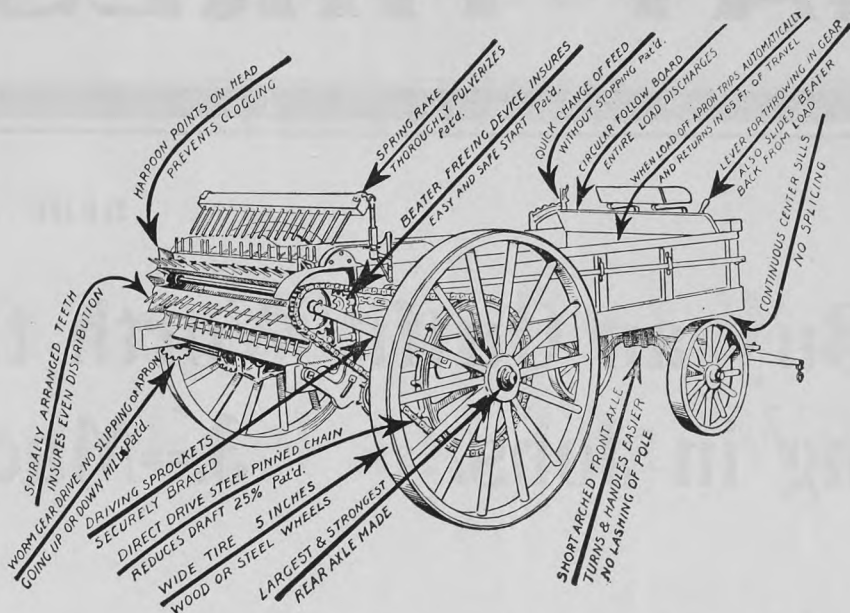
Comparative returns relating to the value of buildings in 1906 and 1905 were obtained in the case of 26 cities, including the larger centres. In these cities the total value of buildings erected in 1905 was \$39,862,634 and in 1906 \$53,316,898. The excess of building in these cities in 1906 over 1905 was accordingly \$13,454,264, or approximately 33.6 per cent. The only localities from which returns were received to the effect that the year was less active than in 1905 were St. Hyacinthe, Que., Hull, Que., Niagara Falls, Ont., St. Thomas, Ont., Chatham, Ont., and Windsor, Ont. The localities in which the increase in the amount of building during the year compared with the preceding year was more than \$500,000, were as follows:

City	Amt. of Increase.
Montreal	\$3,009,602
Toronto	2,822,483
Winnipeg	1,931,150
Vancouver	1,580,910
London	660,350
Hamilton	613,433
Calgary	602,791

In the majority of localities the outlook for 1907 was that the activity which characterized the past year would be maintained.

Don't let the old outfit go too long before you pull it out for repairs.

A MONEY MAKER THE "Success" Manure Spreader



It will pay for itself in one year, in increased crops alone saying nothing about the saving in labor, and remember as you increase the productiveness of your farm you increase its value as well.

Pen Yan, May 12th, 1906.
GENTLEMEN:—

I appreciate the Success Manure Spreader more highly than any implement I have yet found for the farm and can honestly testify that it is all you claim for it. It is not only a great labor saver but I am satisfied that while it spreads the manure over twice the area it more than doubles its value. I use it largely for top dressing.

Yours truly,
C. C. LESTER.

SEND FOR CATALOGUE AND PRICES

THE PARIS PLOW CO., LIMITED, WINNIPEG

The following is part of a letter read before the Canadian parliament by Sir Thomas Shaughnessy, president of the Canadian Pacific.

At the end of 1901 Canadian Pacific had 732 locomotives and 22,473 freight cars; at the end of 1906, the company had 1,204 locomotives and 37,467 freight cars; an increase of 472 locomotives and 14,994 freight cars, or about 70 per cent. in each case, without taking into account the fact that each locomotive and each car was of much greater capacity. These, with the passenger cars and other rolling stock equipment purchased and built, or in process of construction at the end of the year, represent an expenditure approximating \$28,000,000.

During the same five years the outlay for other works, calculated to facilitate the operation of the line, was about \$44,000,000, or a total of

\$72,000,000, and these figures are quite exclusive of \$35,000,000 spent for the construction of new railway lines and for steamships on the Atlantic.

More would have been done if it were possible. Indeed, several large works, for which money had been appropriated last year, were carried over because of our inability to get them completed. We have an order today, for delivery during the next four or five months, rolling stock equipment to the value of \$11,808,751, and we hope to have it all in service before the autumn business commences to move. During the execution of some of the larger works wholly or partially included in the above expenditures, traffic was necessarily delayed. The second track now being built between Winnipeg and Fort William will be a source of very great convenience.

LAMENESS

Whether it is a fresh Bruise, Cut or Strain—or an old Spavin, Splint, Ringbone or Swelling—you can cure your horse with

Kendall's Spavin Cure

Thos. Castles, of Newark, N.J., bought a horse—lamed with a Jack Spavin—for \$100. He cured every sign of lameness with Kendall's Spavin Cure—won five races with the horse—then sold the animal to his former owner for \$1,000.00.

WELLINGTON, N.Z., Nov. 2nd, '05.
"I have found your Spavin Cure a very fine remedy for all sorts of lameness in horses and I am never without it."
E. J. WISBEY.

Get Kendall's Spavin Cure—the remedy used by two nations for two generations. \$1. a bottle—6 for \$5. Our book—"Treatise On The Horse"—will save you many a dollar if carefully read and acted upon. Write today for a free copy.

DR. B. J. KENDALL CO., 27
ENOSBURG FALLS, - VERMONT, U.S.A.



WHAT THRESHERMEN

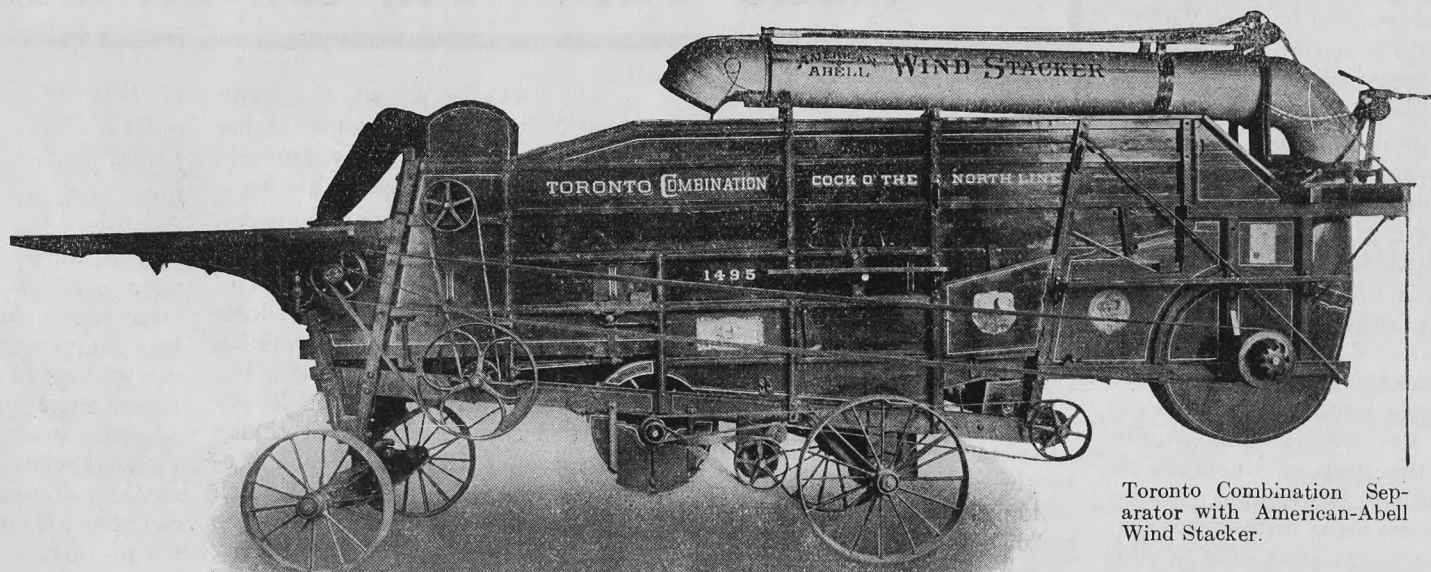
HERE ARE THREE OF THE THINGS RE

1.==To Buy an Outfit Worth the Price Paid.
Bringing in Jobs.

3.==Machines Needing Fe

ALL OF THESE REQUIREMEN

AMERICAN-ABELL THR



Toronto Combination Separator with American-Abell Wind Stacker.

This month we will endeavor to tell you why it is that the American-Abell Separator is without a peer on the market today. We feel that we have a separator that for **CLEAN THRESHING, CAPACITY and DURABILITY**, is positively without an equal. Our machines have stood the test of time and good hard usage, and have come off victors in every case. We were not surprised at this for our separators are constructed upon principles that make for fast work and clean separation. Many manufacturers have fallen into the error of increasing the capacity of their machines for handling the straw at the expense of the more important point of separation.

As the prime object of a separator is the thorough separation of the grain from the straw, nothing is gained by increasing the amount of straw that may be put through the machine unless the method of separation keeps pace with it. Unless both objects are attained, the machine is extravagant in the amount of grain wasted. These two things have gone hand in hand in the construction of the American-Abell separators with the result that we have a machine that puts all of the straw into the straw stack and all of the grain into the bin, and this in the shortest possible time.

One of the principle features of the American-Abell separator is the **GRATE and FORKS**. Every thresher-

man knows the importance of obtaining as much separation as possible from the cylinder, but to be successful in this requires that there be a m grain will fall out after being threshed by the cylinder, and t fall through, otherwise the separation at the grate is not inc ABELL separator with our improved Grate and Fork.

By referring to the cut it will be seen that the Grate is ation of the concaves. It is very simple in construction, being slots in three castings and are so shaped and fastened into the Forks it is carried upward and rearward and deposited on the loosened and shook up, so that the greater part of the grain d pan. To keep the grates from being choked with chaff and iron fingers shaped to conform with it, which are moved back factually keeping it clean, so that the grain and chaff will drop

The Forks are so constructed that they pass through into

American-Abell Engine and

TORONTO WINNI

EN WANT IS PROFITS

INGS REQUIRED TO BRING THIS ABOUT:

2.==An Outfit Capable of Fast Work and
g Few Repairs, Little Fuel and That Will Last.

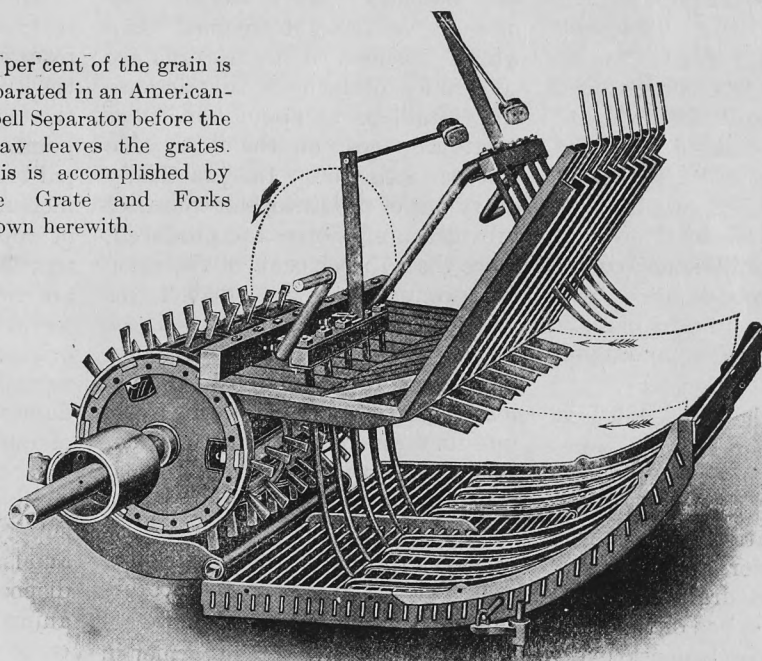
UIREMENTS ARE MET BY THE

THRESHING MACHINERY

Our new 1907 Catalog
Free for the Asking

TELLS YOU ALL YOU WANT TO
KNOW ABOUT A MODERN UP-TO-
DATE THRESHING OUTFIT. DROP
US A POSTAL--WE'LL DO THE REST

90 per cent of the grain is
separated in an American-
Abell Separator before the
straw leaves the grates.
This is accomplished by
the Grate and Forks
shown herewith.



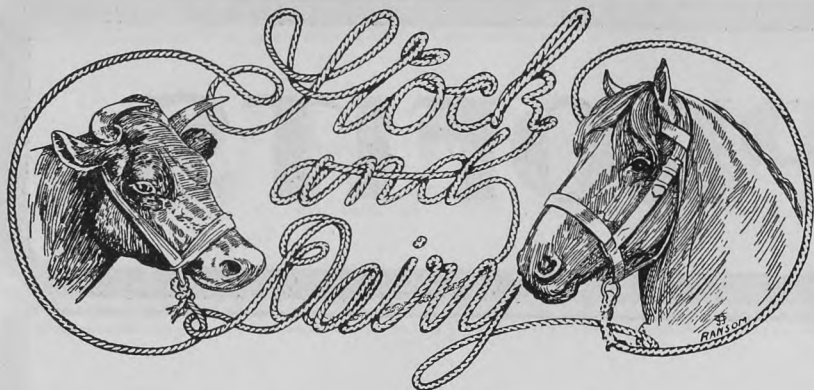
uch separation as possible as soon as the grain goes through the
hat there be a method of keeping the straw loosened up so that the
cylinder, and the grates clean so that all the threshed grain can
grate is not increased. This is accomplished in the AMERICAN-
d Fork.

hat the Grate is directly behind the cylinder and really a continu-
onstruction, being composed of wrought iron slats which slip into
astened into the separator that when the straw is picked up by the
deposited on the front shaker. In this movement the straw is
rt of the grain drops on the grate and falls through into the grain
with chaff and small pieces of straw there are several malleable
are moved back and forth by means of a bell crank lever, ef-
chaff will drop through into the grain pan.

ss through into the straw in a nearly vertical plane, directly back

of the cylinder, travel along the grate in a curve conforming to its shape, give the straw a final kick just as it is passing from the grate to the shaker, and then pass back to the cylinder in a nearly horizontal line. There are two Forks in each separator varying in width with the machine, hung on a heavy steel crank shaft and driven by wide belts. Each belt has been provided with a tightener, by the use of which they can be kept tight, thus giving a uniform motion to the Forks and the best results from the separator. The Fork tines are made of high grade steel, and are fastened to the head with a lock washer and nut. To prevent the Forks from dragging the straw back on their return motion, they work in a steel guard which is so located in the machine that it forms a conduit for the straw from the cylinder to the front shaker and is so arranged that it is impossible for the Forks to get out. The guard is made very strong and stiff and where the angle of the guard changes there are short pieces of sheet-iron extending several inches toward the rear of the machine; the office of these pieces is to stop any flying grain which may come from the cylinder.

and Thresher Co., Limited
WINNIPEG REGINA



Shall the Farmer Raise Draft Horses?

In breeding draft horses too much attention cannot be given to the question of weight. At all of the leading draft-horse markets, horse-flesh sells at the rate of twenty-five cents per pound for each additional pound from 1,600 to 1,800 pounds; for fifty cents per pound from 1,800 to 2,000 pounds; for one dollar a pound from 2,000 to 2,200 pounds; and from two to two and one-half dollars per pound from 2,200 pounds upwards, providing, of course, that the horse is sound, well made and desirable in every other respect. Thus the heavy ones are the kind we should all aim to produce, because at best we will get plenty of the lighter weights to meet the demands for the same.

While a good horse can never be of a bad color, still some colors, such as the nicely-dappled gray or blue roan, are more in demand than others, thus command fancy prices.

In discussing the advisability of the average farmer keeping pure-bred draft mares, a somewhat new but very timely topic is opened up for consideration. Just why the average farmer has not been keeping pure-bred draft mares for a decade or more is one of the questions which amazes almost every man who has had any experience in the production of pure-bred horses in this country, or has any acquaintance with the methods pursued in the production of horses in practically all of the European countries. Is there any more reason why the average farmer should keep pure-bred cows, pure-bred ewes, or pure-bred sows, than in the case of pure-bred draft mares. Draft horses are needed on the farm to perform the necessary farming operations. Is there any good reason why a considerable amount of this work should not be done with good, pure-bred brood

mares? If the English farmer, the Scotch farmer, the French farmer and the Belgian farmer on their small farms find it profitable to keep a pair or two of pure-bred draft brood mares to do their farm work, why should not the same policy be a wise one to pursue in this country? When this policy becomes general on the rich farm lands of the West, two things, both of which are very much in evidence at the present time, will gradually disappear; First, the importation of such a large number of stallions, many of which are a detriment to the industry; and, second, the presence of the glib-tongued chap whose business it is to organize companies of farmers to purchase these stallions at about five times what they cost on the other side of the Atlantic. In practically every one of the European countries in which draft horses are produced, more than 75 per cent. of the same are produced on the small farms and by the tenant farmers. These farmers not only require their pure-bred draft brood mares to do the major portion of the farm work, but they also require them to rear a colt each year, which in turn is sold to pay the rent of the ground used. In this way these people have been able to pay their high rents and in addition comfortably support their families.

It will pay the average farmer in this country to keep pure-bred draft mares. It does not cost any more to feed a pure-bred draft mare than it does to feed a scrub mare of the same size. The pure-bred mare will do just as much work as the grade mare. One good pure-bred stallion colt at one year old will readily command as much money as will a pair of high-class five-year-old grade geldings. Many farmers to-day are using pure-bred draft mares to perform their farm work and in addition raising good colts from the mares each year. The stallion colts find ready sale when from one to two years, at

from four to seven hundred dollars each. These men have settled the question as to whether or not it will pay to keep pure-bred draft mares. One farmer in Northern Illinois attended a neighbor's sale in March, 1903, and in order to help matters along, bid on a few things which he thought he did not need. He escaped trouble until a pure-bred five-year-old Percheron mare, in foal, was led into the ring. He bid on her and she was knocked down to him at \$300. He thought he did not need her, thus offered her to another neighbor for \$290, but did not succeed in making the deal. He kept the mare, and she has raised him a good colt each year. He has had the mare a little more than three and one-half years, and she has done her share of the farm work. He has sold three of her colts for \$1,250, and has one left for which he has refused the small sum of \$500 before it was eight months old. Has this mare paid her way?

A Study of Breeds of Swine.

An instructive pamphlet devoted to breeds of swine has been issued from Ottawa as Bulletin No. 11, of the live stock branch. It deals with the history, characteristics and points of excellence of the six principal breeds reared in Canada. Commencing with a review of the origin of domestic swine the bulletin teaches that the many varieties that are found in various parts of the world are all descended from one original stock of wild hogs. The variations that were effected by domestication upon the progenitors of our present breeds are followed out briefly. It is pointed out that confinement along with an ample supply of food soon affected great and lasting changes in conformation, disposition and aptitudes of the animals. With these changes there came about a breeding to type and colour in various localities as suited the requirements and desires of the hog raisers resulting in the course of time in establishing the present pure breeds.

The breeds described in the bulletin, and represented by illustrations of typical animals are the Yorkshire, the Tamworth, the Berkshire, the Chester-White, the Poland-China and the Duroc-Jersey. The first and second are described as bacon breeds, the third and fourth as midway between the bacon and the lard type and the two remaining breeds as belonging to the lard producing class of hogs.

The improvement of the Yorkshire is traced down from 1760, the time of Robert Bakewell. It was not until 1860 that this breed was given a separate classification at English shows. Among the chief classifications of the Yorkshire of the present day are its docility, vigor, muscular development and its excellent crossing qualities. They are said to be early maturing, reaching with good care a marketable condition, weighing from 180 to 220 pounds at from 6 to 7 months old.

The Tamworth which is also described as belonging to the large breeds is traced from about 1815 when it is said to have been introduced into England from Ireland by Sir Robert Peel. The author of the bulletin claims that this breed is purer than any of the others in as much as its improvement has been brought about almost entirely by selection of animals within the breed itself. It is stated to have received little attention outside of the counties of Leicestershire, Staffordshire and North Hamptonsire until about 1870, when the bacon curers of England commenced a campaign against the then fashionable short, fat and heavy shouldered pig, which they found quite unsuitable for bacon production. The Tamworth then came into prominence as an improver of some of the other English breeds. It seems to have maintained from the first its disposition to put on lean meat during its growth.

The Berkshire is stated to have assumed a fairly uniform and desirable type about the year 1825. It was at that time a fine appearing animal, very hardy, of good size and length yet without coarseness. Unfortunately owing to a fashion which prevailed some years afterwards, the Berkshire was developed into a thick, short animal with heavy jowl, thick neck and fat back. Later this style of hog became unpopular and the attention was again given to developing greater length, symmetry and fleshiness. As now found the Berkshire exhibits desirable qualifications as a packers' animal.

The history of the Chester-White is extremely interesting. It is said to trace back to a pair of white hogs imported into Chester County, Pa., from England in 1816. This importation made a marked change in the swine of the district with the result that the Chester-White rapidly grew in favour. In its early years it was a fairly lengthy type of hog but for many years past it has been classed as a corn belt hog of the thick backed sort. A few breeders

USE

CARNEFAC Stock Food

FOR THAT THIN HORSE

CRANE & ORDWAY CO.

WE CARRY IN STOCK A FULL LINE OF

Threshers' Supplies and Well Drilling Machinery

FOR CATALOGUE AND PRICES WRITE TO

Crane & Ordway Co., LOMBARD STREET
WINNIPEG MAN.

St. Paul	-	Minn.
Duluth	-	Minn.
Watertown	-	S. D.
Fargo	-	N. D.

The Eyes of the World and Canada West.

The recent trip of the representatives of several of the leading United States magazines through Western Canada has been the direct cause of these same magazines carrying illustrated articles on the great Canadian West. In the aggregate it is fair to presume that these same articles will be read by 30,000,000 of people, and if anyone can find any better advertising for any section of a country than this, it is certainly up to him to submit plans and specifications.

All eyes are turned towards Western Canada, and what is more, and still better, the country warrants it. The Canadian Northwest today is not only repeating the early history of the conquering of the Northwestern part of the United States, but it is doing it in much less time. The pioneers of the American West were largely novices, and settlers had only the most primitive tools to assist them. The present settlers of the Canadian Northwest in the majority of cases have served their time in the hard school of the American West. Most of them are provided with funds, and all of them are within reach of the most improved tools and machinery that the farming world have known. The result of this is that the country is growing at such a pace that it is hard for the manufacturer to keep up with it. Unless he is on the ground and fully acquainted with conditions it is almost impossible for him to realize the growth that is taking place. There is a new situation being created, a situation that only the alert and progressive manufacturer can grasp, and while many of them are taking advantages of the opportunities afforded, there is yet much land to be possessed. One of the latest of the companies across the line to introduce themselves to the Canadian West is the Crane & Ordway Co., of St. Paul.

No better example of this could be offered than the addition to the supply depots of Winnipeg of a branch house of the Crane & Ordway Company, of St. Paul. This

company has recognized Winnipeg as the natural distributing center for Manitoba, Alberta, Saskatchewan, and the territory still without provincial organization. It has built for the future as well as for the present, as may be inferred from the illustration of the company's handsome and commodious new building on this page.

The building is of brick, with stone trimmings, 66 feet front, five-stories high, in addition to a roomy basement. In this modern warehouse will be carried exclusively Crane Co. goods in the lines the company manufactures; but in material that Crane Co. does not make, the branch house will endeavor, as far as possible, to buy from Canadian makers—always keeping in mind the quality of goods handled. There

are full lines of thresher supplies, belting, hose, endless belts, tank-pumps, etc.; and the company makes a specialty of heating material. In fact, its "Winnipeg boiler" already has made an enviable record for efficiency and economy.

This is the only house in the Canadian Northwest carrying full lines of the products mentioned, and its facilities for taking care of all the business it can secure are unsurpassed. The branch is under the direct management of Mr. J. H. Leonard.

We predict for the new company success. Their experience on the other side of the line has given them an organization and equipment for doing business that can only make them masters of the situation here. The Canadian Thresherman and

Farmer extends most cordial greetings to this concern, and trust that our readers will give them a liberal share of their patronage.

Biggest Whistle in the World.

The biggest steam whistle in the world is on a street railway power house at East St. Louis, Ill. It is a three-chime and can be heard 20 miles. It takes half a ton of coal to produce the steam necessary to blow the whistle one minute. The "whistle" is really three whistles, the largest of which is nearly 6 ft. high and almost as large around as a man. It has connection to an electric clock regulated by Washington time and is blown for 10 seconds at 7 a. m., 12 noon and 6 p. m.



CRANE & ORDWAY CO.'S WINNIPEG BRANCH.

THE FUNNY WORLD

Chicago
ENGRAVERS CO.

The matter on this page lays no claim whatever to originality. The one idea is to amuse, to provoke a smile. If it fulfils this mission we shall feel amply repaid for the time and labor expended in its preparation. Have you read or heard something that has made you laugh? Has it chased dull care away for a time? Then pass it along for publication in our Funny World. Such contributions will be greatly appreciated.

"I asked the boss to supplement my salary today."

"Did he do it?"

"No; gave me the haha."

"Sort of comic supplement, eh?"

CITY CHAP: "That's a wonderful mineral spring. It has iron in it, I guess."

FARMER WAYBACK: "Indeed it has. Why, ole Sol Perkins's mare drank out of that there spring, and, by Jove, she hain't been shod since! Her shoes just grow out natcherel from her hoofs."

A MASSACHUSETTS minister was making his first visit to Kentucky several years ago. He had to spend the night in a small mountain town where feuds and moonshine stills abounded. Engaging in conversation with one of the natives, he said:

"My friend, this is a very bibulous State, I hear."

"Lord!" replied the man, "there hain't twenty-five Bibles in all Kentucky."

ONE Sunday John Wanamaker visited the Sunday-school classes in which he was greatly interested, and after talking the lesson over told the pupils he would try to answer any questions the boys or girls wanted to ask him.

One little girl raised her head, and spoke out timidly: "Will you please tell me, Mr. Wanamaker, how much those large French dolls are that you have in your show-window?"

"Mama, I've got a stomach-ache," said Nellie Bly, six years old.

"That's because you've been without lunch. It's because your stomach is empty. You would feel better if you had something in it."

That afternoon the minister called, and in the course of conversation remarked that he had been suffering all day with a very severe headache.

"That's because it's empty," said Nellie. "You'd feel much better if you had something in it."

Miss Sallie Miller, the acknowledged belle of the town, had fewer beaux than were her due. This was owing to her father's peculiar aversion to all young men who called on his daughter. He had a disconcerting way of taking possession of the porch and snubbing her callers while they were waiting for her to come down.

One evening Mr. Newton Brown, a bashful young swain, came a trifle too early for Miss Sallie. Mr. Miller and Newton's father were close friends, but the boy had grown so rapidly that the old gentleman did not recognize little Newt Brown in this tall, gawky youth. "It looks as if it might rain," the young fellow ventured timidly.

"Tain't agoin' to rain," was the gruff response.

For about a quarter of an hour they sat in silence. Finally the old man's curiosity got the better of him.

"Who are you, anyway?" he growled.

"Newton Brown, sir."

"What! Not old Jake Brown's son?"

"Yes, sir."

"Well, well," said Mr. Miller more kindly, "it may rain. It may rain."

There was once a baby who was frolicsome,

And people said, "Isn't he rollicksome!"

"Ah, yes!" said his dad,

With a sigh that was sad,

"We rolic each night—for he's colic-some!"

A MAN entered a restaurant, took a seat, and, after a little deliberation, asked the waiter for a plate of "fly-specks." The waiter reported the uncomplimentary request to the proprietor, whereupon the latter approached the customer and informed him that they did not "serve fly-specks." "Then," was the reply, "why don't you take them off the bill of fare?"

A middle-aged farmer accosted a serious-faced youth outside the Grand Central Station in New York the other day.

"Young man," he said, plucking his sleeve, "I want to go to Central Park."

The youth seemed lost in consideration for a moment.

"Well," he said finally, "you may just this once. But I don't want you ever, ever to ask me again."

"Biddy," says Pat, timidly, "did ye iver think o' marryin'?" "Shure, now," says Biddy, looking demurely at her shoe, "shure, now, the subject has niver entered me mind at all, at all." "It's sorry Oi am," says Pat, and he turned away. "Wan minute, Pat," said Biddy, softly, "ye've set me thinkin'."

REPRESENTATIVE MAYNARD, of Virginia, was pleading for more money for the Jamestown Exposition. Leader Payne, of the Republicans, objected, saying that when a contingent appropriation of \$250,000 had been made it was promised there would be no more requests.

"That reminds me," said Maynard, "of a conversation between two negroes in my town on money matters."

"Sam," said one, "my wife pesters me 'most to death for money. It's a dollar one day, and a half-dollar the next, and two dollars the next, and five dollars the next. I'm 'most pestered to death."

"What your wife done do with all that money?" asked the other negro.

"Deed I don't know. I ain't never give her none yet."

She was newly married and did not know a little bit about either housekeeping or shopping, and was giving her first order. It was a crusher; but the grocer was a man used to all kinds of orders, and could interpret them easily.

"I want ten pounds of paralyzed sugar," she began with a business-like air.

"Yes'm. Anything else?"

"Two tins of condemned milk."

"Yes'm; anything else?"

He set down pulverized sugar and condensed milk.

"Anything more, ma'am?"

"A bag of fresh salt. Be sure it is fresh."

"Yes'm. What next?"

"A pound of desecrated codfish."

He wrote glibly, "desiccated cod-fish."

"Nothing more, ma'am? We have nice horseradish just in."

"No," she said, "it would be of no use to us. We don't keep a horse."

"Two Mormon boys went to school for the first time out in Utah," relates Congressman J. Adam Bede, "and the teacher asked them their names."

"John and William Smith," the boys replied.

"Ah, then you are brothers! How old are you?"

"Each ten years old, ma'am."

"Indeed! Then you are twins?"

"Please, ma'am," replied one of the boys, "only on our father's side."

SOME lady visitors going through a penitentiary under the escort of the superintendent came to a room in which three women were sewing.

"Dear me!" whispered one of the visitors, "what vicious looking creatures! Pray, what are they here for?"

"Because they have no other home. This is our sitting-room, and they are my wife and two daughters," blandly replied the superintendent.

Maria Jane (to her young man, who enters bearing a monstrous fish): "My, Jarge, what a bee-aautiful fish! Where did you get it?"

Jarge: "A man give it me at Billingsgate a week ago. I've been keeping it for your birthday, Maria."

Maria Jane: "But my birthday ain't till to-morrow."

Jarge: "I know, Maria. But, well—to tell the truth—me—an' the fish—is gettin' kind o' impatient. So I just dropped in to know if you'd mind callin' it your birthday to-day."

Not long ago a city editor in Ottumwa, Iowa, was told over the telephone that a prominent citizen had just died suddenly. He called a reporter and told him to rush out and get the "story." Twenty minutes later the reporter returned, sat down at his desk, and began to rattle off copy on his typewriter.

"Well, what about it?" asked the city editor.

"Oh, nothing much," replied the reporter, without looking up. "He was walking along the street when he suddenly clasped his hands to his heart and said, 'I'm going to die!' Then he leaned up against a fence and made good."

THEY were newly married and on a honeymoon trip. They put up at a skyscraper hotel. The bridegroom felt indisposed and the bride said she would slip out and do a little shopping. In due time she returned and tripped blithely up to her room, a little awed by the number of doors that looked alike. But she was sure of her own, and tapped gently on the panel.

"I'm back, honey; let me in," she whispered.

No answer.

"Honey, honey, let me in," she called again, rapping louder. Still no answer.

"Honey, honey, it's Mabel. Let me in!"

There was silence for several seconds; then a man's voice, cold and full of dignity, came from the other side of the door:

"Madam, this is not a bee hive; this is a bath-room!"

The DESIGN

OF THE HAWKEYE

Is such that it embodies good work with simplicity, capacity with light draft, rapidity with ease, light weight with strength, durability with efficiency and satisfaction.

It will handle all kinds of grain in any condition, feeding it to the separator in a regular even flow just sufficient to meet the capacity of the separator. It will not overload a machine however small the capacity, or it will feed the largest type of separator made all it can handle. This is due principally to our Straw Governor.



Next month we'll tell you more about the Hawkeye, but in the meantime write for Catalog.

Our Straw Governor consists of a friction clutch which drives the rake, and a float hung across the carrier inside the feeder and connected to the friction clutch by means of a rod and friction band. In ordinary feeding the grain passes under the float without causing the Straw Governor to act, but if an extra amount is pitched on, or the bundles are piled too deep, the bunch will press against the float, swinging it toward the cylinder, thus throwing the friction clutch off and allowing the rake to stop.

By this time the bunch has reached the feed hooks and they are tearing away at it, pulling it to pieces and feeding it to the cylinder. As soon as the overload is removed, the float swings back to its original position and the rake resumes its normal speed. There is **no slugging, no overloading** of the separator, **no lost motion, lost time or wasted grain**, but a steady hum of the separator cylinder that goes hand in hand only with steady, even feeding.

This governor is **readily and easily adjusted** while the machine is running to feed as light or as heavy as the operator wishes, making the feeder suitable for either large or small machines, and giving equally as good satisfaction on one as the other. If the separator is small or the power limited, the Straw Governor may be set down to just meet the separator's capacity or the engine's power. If the rig is a large one, the Straw governor may be opened up till it feeds all the separator will care for.

Pitchers who try to overload the separator for the sake of getting a rest will soon learn that the Hawkeye will not "stand for it," but will simply take what the operator has it set for and will stop the rake when more than that amount is pitched.

Branch House, WINNIPEG, Canada

PARSONS HAWKEYE MFG. CO.

Factory, NEWTON, Iowa, U.S.A.

THE CHAPIN CO., CALGARY, ALTA, General Agents for Alberta.

Important Changes in Engine Governors.

All threshermen will be very much interested in hearing of the new features introduced in governors to provide for readily securing a wide range in speed of engines that results in a saving of fuel and like-

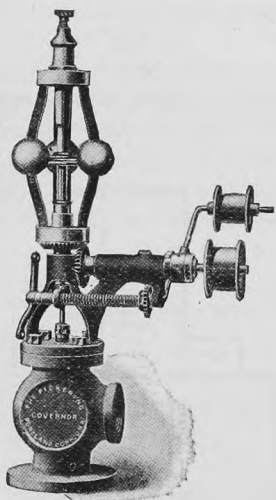
wise addition in power, because the use of these rangers enables you to instantly adjust your engine speed to requirements, so that when a very low speed is desirable you are not throwing away double the steam necessary for the service at increased cost in fuel; or when you require greatly increased power for any duty you can immediately tune

up speed of engine until you get the power. These rangers have been introduced by the Pickering Governor Co., who are well known to all threshermen and being protected by recent patents are applied to that governor only.

The above illustration shows the form generally used during past season, which has adjustment at extreme top operated by hand, while governor is in motion.

Simply turning the small thumb nut shown in cut in either direction will instantly change speed of engine, and as none of the ranger parts turn with the governor it is not necessary to provide any locking device.

Below is shown a later form,



in which the adjustment is at a low point, making it more accessible

when governor is in position on engine, while in placing the ranger at the lower position the governor is decreased in might, which is an advantage when placed under cab.

The transparent cut here shown will give a clear idea of this simple arrangement.

The adjustment is made by pushing steel balls through a channel that makes the movement positive, rather than being conveyed through a spring, while with absence of joints there is no possibility of wear or vibration interfering with its continued satisfactory performance.

This well known governor is made by the Pickering Governor Co., Portland, Conn., who will be pleased to give any information.*

Why Shoes Shine.

The philosophy of polish on any substance is simply the production by friction of such smoothness of the surface layer of its particles that

they readily reflect the rays of light falling upon them. With leather the best substance for the purpose seems to be a paste containing bone-black—that is, the powder obtained from charred bones—to which is added a small quantity of acid to dissolve it, oil to preserve the soft texture of the leather, and treacle and gum to render the mass adhesive.

The Biggest Leather Belt in the World.

It was made in Chicago and runs a saw mill at Tacoma, Wash. It is 114 ft. long, 7 ft. wide, 3-ply thick, weight 2,300 lb., and 225 steers contributed the centers of their hides to make it. Notwithstanding its size and weight, and the tremendous strains to which it is subjected, not a peg, rivet or any metal fastening whatever holds it together. It was simply stuck together with best quality of cement under 250 tons pressure.

An Austrian takes his oath in front of a crucifix, flanked by lighted candles. With upraised right hand he says:

"I swear by the all-powerful and all-wise God that I will speak the whole truth, and nothing but the truth, in answer to any questions that may be asked in this court."

BUILDING & DEPARTMENT

THE design and plans shown herewith are of a modern house well adapted for use in village or country. It contains seven rooms, bath, pantry and closets. Basement extends under the whole house and there is a large front porch and a smaller rear porch. Attention is called to the arrangement of first floor, which contains a library in addition to the usual parlor and dining room. Front and rear stairs have been provided and also stairs to attic. This house can be readily heated by a furnace if desired, or if not, stoves can be employed, owing to arrangement of chimneys. There are two closets on the first floor in addition to four on the second floor. The dressing room off of front bed room is a nice feature and will be appreciated by the women members of the family. The bath room is unusually large, and located directly over kitchen. Outside steps to cellar have been provided as well as inside stairs from kitchen. The design is very attractive and if a proper color scheme is carried out the results should be very satisfactory. There is a large, well lighted attic, with stairway to it from second floor hall. The porch is a very attractive feature of this house, extending as it does across the front and partly around one side, with two sets of steps leading to it. This house has been erected several times at various cost, owing to the difference in prices of building materials

and labor in different localities, but \$3,000 seems to be about the average price. Any further questions regarding either design or plan will be cheerfully answered by us.

To Prospective Builders.

We have made arrangements whereby we can furnish complete plans of any of the designs appearing on this page for \$3.00, postage prepaid. These plans are sufficiently complete so that any carpenter may construct the house therefrom.

The Farm Barn.

There is a homely saying among farmers that "what the head won't do the heels will have to." It prob-

work, and decide how your plans will best accomplish it; also keeping in mind that some day you may wish to enlarge the building. Look out for the little things—the location of the well, for you will have to carry many a pail of water in a year. Is the manure pit going to contaminate the water? Is the hay loft arranged so that the hay seed will not cover the new buggy and the Sunday harness every time you take out a fork full? Is the floor made of matched lumber? The trap door to shove out manure is a little thing, but mighty important, because the hardest work in a barn is cleaning it. Let the pit be located with a view to the greatest possible convenience, if you do nothing else intelligently. If you make a concrete pit to keep the liquid ma-

cases hemlock is the cheapest for the frame, but it is not thoroughly satisfactory, and if you can get out an oak or chestnut frame, even with the natural undressed posts, you will be doing work that your grandchildren will bless you for.

For the sake of economy, the question of siding may be solved by tongue and grooved hemlock. It will not be very serviceable, however, and in a short time the cracks will have to be battened because the sun and wind have warped the boards. The best siding is white pine, but in these days white pine is an expensive luxury. Clear pine—that is boards free from knots and sappy places—is almost out of the question, unless money is no object. A poorer grade of pine will serve, but the knots must be shellacked and painted almost immediately after the boards are put up, or out they will come. One of the best cheap things is novelty siding.

Of course, a cedar shingle roof is good and will not rot for many years, but an iron one will never rot, and doesn't cost much more.

When you build a "basement" or "bank barn," be sure not to have the basement too deep in the ground or it may be damp. It should be placed to admit of windows on the sides—at least two-thirds of the way back. Of course, in most cases, the walls would be of stone, brick, or concrete, but a really serviceable basement can be built of wooden walls, coated over with tar, and then with tar felt nailed over that.



ELEVATION.

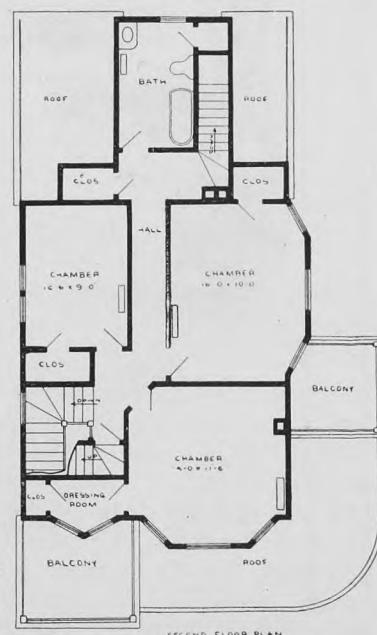
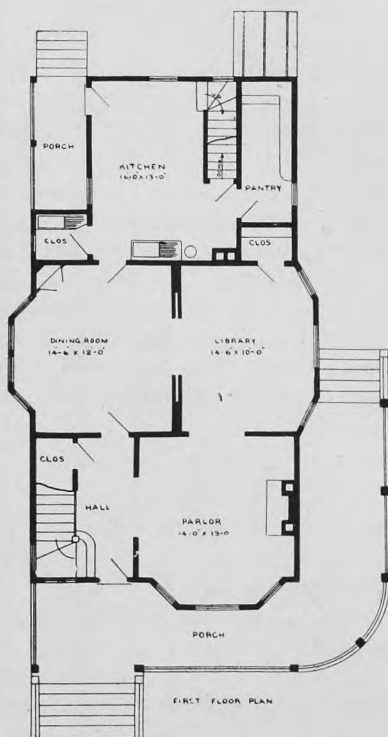
ably was the conclusion of the fellow who built his barn without wasting much time thinking about it in advance. All barns were alike to him. They were merely a necessary evil on the farm, something that was painted red, and a place to keep stock and fodder, and perhaps, if there was room, to store the mowing machine and the hay rake through the winter. Just one hour's hard thinking before he built would have saved him many a step and many a dollar.

In planning the location and details of a barn, you cannot put too much thought upon the subject. The day begins in there, and the night finds you in it taking care of the stock and making them comfortable. The only way to get a satisfactory barn is to carefully think over each step of the day's

nure from going to waste, you will save the cost of it in better manure the first year.

While there may be some objection on account of dampness, as a rule a good place to locate a barn is on a "side hill," with a southern exposure. This means a basement. Put the cows in the warmest, sunniest corner, and see how they will reward your foresight in an increased milk production. The best stable floor is a cement one. Once there it will last forever. It makes the stable warmer, and it is clean and sanitary. It is well to have movable planks in the stalls. Most stables are dark—they should be bright and sunny. In the fly season, you can darken the windows.

The kind of material to use is a difficult thing to settle, and depends upon local conditions. In most



Please mention **The Canadian Thresherman and Farmer**

What does it Cost the Farmer to Market His Crops?

IT is one thing to raise a crop and still another to market it. Most farmers, however, scarcely ever consider the latter when as a matter of fact it is one of the most important items in crop production. The Department of Agriculture of the United States has just had prepared by Frank Andrews, transportation expert of the Division of Foreign Markets, a bulletin which gives the cost of hauling farm crops from the farms to shipping points. The figures given are based upon returns from nearly 1,900 counties, and cover practically the entire farming area of the country.

The average cost to the farmer of hauling wheat from farms to shipping points is given as 9 cents per 100 pounds, the average distance hauled is nine and four-tenths miles, and the average wagon load of wheat weighs 3323 pounds, thus containing about fifty-five bushels. For cotton the average load is 1702 pounds, distance from shipping point eleven and eight-tenths miles, and cost of hauling sixteen cents per 100 pounds. Reduced to terms of cost per ton per mile the rate for wheat is nineteen cents and for cotton twenty-seven cents.

The highest cost of haul is for wool, which is carried on an average thirty-nine and eight-tenths miles from farm or ranch to shipping point at a rate of forty-four cents per 100 pounds for the entire distance. The lowest cost of any one product is for hemp, which is hauled from farms to shipping points at an average cost of six cents per 100 pounds, the average distance hauled being five and two-tenths miles and the average load of hemp weighing 3393 pounds.

For the entire distance from farm to shipping point, corn, oats and barley are each hauled at an average cost of seven cents per 100 pounds; hay, flaxseed, rye and timothy seed, eight cents; wheat, potatoes and beans, nine cents; tobacco and live hogs, ten cents; rice, hops and buckwheat, eleven cents; apples and peanuts, twelve cents; vegetables (other than potatoes) and cotton seed, fifteen cents; cotton and fruit (other than apples), sixteen cents; and wool, forty-four cents.

Except in the case of wool, practically all costs represent the expense incurred by farmers in hauling their own produce. Wool is hauled in the Rocky Mountains largely by regular freight wagons, and the wool growers pay for the hauling at varying rates per 100 pounds.

The total tonnage of farm products hauled on country roads in the United States is not known, but of twelve leading products it is estimated that nearly 50,000,000 tons were hauled from farms during the crop year 1905-06, at a cost of about \$85,000,000, or more than five per cent. of their value at local markets. Of this traffic, 40,000,000 tons represent the weight of corn, wheat and cotton, and the cost of hauling these three products was \$70,000,000.

The number of working days taken to haul twelve leading crops from farms to shipping points during the crop year 1905-06 is estimated at 21,417,500 and the number of loads taken as 30,319,000. The greatest time for any one crop, in hauling to shipping points, is 8,494,200 days for corn; but if the time taken for hauling to local mills the wheat consumed in the countries where grown

be included, the total number of working days taken for hauling wheat from farms during the crop year just mentioned would be over 8,900,000.

Although there were fewer loads of cotton than of oats, it required 1,000,000 more working days for men and teams to haul the fiber than this grain, the average time for a round trip for hauling oats being six-tenths of a day and for cotton one day.

Including wheat hauled to local mills for grinding, the total number of wagon loads of the twelve crops just referred to was 34,200,000, and the services of men and teams for 24,500,000 working days were used in moving these loads.

The greatest distance over which it will pay to haul a given crop will practically limit the production of that crop for the market. Beyond that limit a more valuable product must be made. Cotton is hauled a greater distance than wheat, and wool is hauled on an average more than four times as far as wheat and more than three times as far as cotton. Live animals are other profitable substitutes for crops on land remote from shipping points, for the animals may be driven at an expense far less than the cost of wagon transportation.

The distance limit of profitable farming for a given crop may often be extended by improving methods and means of hauling. Better wagons and horses may be used, roads may be improved, and better facilities may be had for receiving the products at local markets and shipping points. Improvements of this kind tend to lessen the expense of hauling a load, and thus make it profitable for farmers to haul from greater distances. From tables in the bulletin in question, it is seen that average loads for the same product weigh in some States twice as

much as in others, and consequently the expense of hauling is much less in the former States than in the latter for similar distances.

The average distances from farm to shipping point for twenty-one of the twenty-three products treated in this report range from seven to twelve miles. The average distance over which hemp is hauled is five and two-tenths miles; oats are hauled an average of seven and three-tenths miles; corn seven and four-tenths; seven and five tenths; live hogs, seven and nine-tenths; timothy seed, eight; peanuts, eight and one-tenth; potatoes and buckwheat, eight, and two-tenths; hay, eight and three-tenths; rye, eight and four-tenths; barley, eight and eight-tenths; beans, nine; wheat, nine and four-tenths; apples, nine and six-tenths; tobacco and vegetables (other than potatoes), nine and eight-tenths; flaxseed, ten and four-tenths; cotton seed, ten and seven-tenths; fruit (other than apples), eleven and six-tenths; hops, eleven and seven-tenths; cotton, eleven and eight-tenths; and wool, thirty-nine and eight-tenths miles.

The most remote farms from which a certain product is hauled in small quantities may be easily several days' haul from a shipping point but the product hauled, unless itself valuable, must usually be taken on the same load with goods of relatively high price. A few bags of corn or potatoes may be hauled sixty or seventy miles over mountain roads to a local market and sold without loss to the producer if the same wagon carries also a considerable quantity of poultry and dairy products. From one community in the Rocky Mountains, wheat and oats are hauled on wagons a distance of 100 miles, cotton is hauled from one county in the southwest 110 miles to a shipping point, while

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one report from the west of the Rocky Mountains gives 165 miles as the length of the longest wagon route over which wool is taken from shearing camps down to a railroad station.

Hardness of Woods.

The classification of woods according to their degrees of hardness has so far been somewhat vague, and the determinations made have not agreed with each other, for the reason that they have not been based on exact figures. M. Busgen, in a German publication, gives a scale of degrees of hardness, arranged by himself on a mathematical basis. Busgen examined more than two hundred kinds of wood (from the collection of air-dried woods in the Forestry School at Munden), by means of a process which consisted essentially in forcing a steel needle into the wood by weights. The softer the wood, of course, the less weight is required to penetrate it. Since, however, no wood is homogeneous, that is, not equally hard all through, each variety was subjected to a succession of experiments, and the average of the different figures was used for the scale.

Eight degrees of hardness are distinguished. I, "very soft," comprises the woods indicated by the figures from 1 to 10; for example, the silver willow, 4, the pine, 6, 5, the black poplar, 8, and the lime, 9, 5. "Soft," (II) woods are the fir, 11, the alder, 15, the elm, 16, 5, the birch, 17, and the oak, generally considered a very hard wood, 20. III, "somewhat hard," includes the pear tree, 22, 5, and the ash, 30. IV, "quite hard," includes the maple, 35, the copper beech, 35, the plum tree, 38, 5, and the acacia, 40. The walnut, 45, and the hornbeam, 50, are called "hard," V. The cornel-wood (Cornus) is "very hard," VI. No wood which is known corresponds to the designation of the next degree, VII, "bone-hard," but several foreign trees, such as the box, 80, the iron-wood, 85, the lignum vitae, 90, the tree called "quebracho," 110, and the African red ebony, 140, the hardest wood known, come under the last degree, VIII, called "stone-hard."

We are all familiar with various systems of classification in the scientific world, such as, for example, the classification with regard to the weight of objects, called ordinarily specific gravity, but this is the first time apparently that such a system has been applied to designate degrees of hardness in woods.

See that the calves and yearlings are not lousy when put in winter quarters. A lousy calf will not thrive. Fowls should be kept out of the stables or the cows will surely become infested with lice.



without giving the house owner who uses it a feeling of great satisfaction. **WHY?** Because he knows that "Vulcanite" Roofing is the most perfect, economical and wearing roof protection made.

That's Why

Vulcanite Roofing

is UNIVERSALLY used.

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We do not belong to the Jobbers' or Retailers' guild or association or any trust.

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THE REASON WHY



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If you examine it you will notice that it is composed of five different layers.

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This mineral surface is chosen for its weather-resisting qualities, and does away absolutely with painting and coating.

Underneath the mineral surface are alternate layers of long-fibre, wool-stock felt of the best grade, and between each sheet and under the mineral surface on the top is a layer of a specially prepared Coal Tar Pitch, the greatest waterproofing material known.

This short description will give you some idea of how carefully Amatite is constructed and what effective protection it will give against weather of all kinds.

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The best proof, however, is to see a Sample, which we will send to any one free upon receipt of name and address. Write to nearest office.

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Assets over Liabilities, December 31st, 1906 \$224,096.56
The Number of Farmers Insured December 31st, 1905 15,248

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The Largest Agricultural Fire Insurance Company

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By CLINTON DANGERFIELD.

"I HERD by myself," said the old Covenanter, sternly; "I ask naught of you pleasure-loving Canadians. Can ye not let a mon alone?"

"I am willing enough to let you alone, sir," returned young Peyton, frankly. "It's chicken I want. I'll pay you almost anything for the privilege of shooting in that wheat-stubble—there's hundreds of acres of it, as level as a table, a monstrous fine breeding-place. I suppose the coveys have been accumulating there for years?"

"As they shall continue to accumulate," retorted the Scotchman, grimly, a satisfied curl on his thin lips. "And now I warn ye—if I'm bothered any further about yon birds, I'll tak' a hand in the shootin' myself—but it's ye and your kind will furnish my marks. I'll pepper your blood-stained hunting-togs with fine shot the first time—with buck the next. Off with ye—off, I say! Ye are seeds of destruction—offending weeds in the eye of the Lord."

"Nice thing to know the Almighty's personal opinion so closely," retorted the young Cavalier, turning on his heel. He might have added more, have defied the possibility of a lead sprinkling; but his eyes suddenly flashed up to a window, whereby stood the prettiest, demurest, yet most coquettish lass in all the Dominion—Ailsie Cameron. Her father caught the look, and waxed furious.

"Out of my gate, ye offscouring!" he shouted, making a boarlike charge at the young huntsman, while Ailsie screamed from her window:

"Dinna hurt my father, Mr. Peyton! Father, be careful!"

Young Peyton was scarcely more than a lad, spoiled and unused to crossing, but he kept his temper, and when the old man would have laid his cane on the boy's shoulder, Peyton contented himself with using his musket in fencing, and so retreated to the gate; his superior skill enabling him to parry every attack.

Once outside the gate he swung into his saddle and galloped off, crying to Ailsie that she would yet be an aristocrat's charming bride.

"If I hadn't a sweetheart of my own," he added, as a Parthian shot, "I'd win you myself."

"The Lord suffereth such men as an ensample of folly, as a warning to the wise!" thundered the Covenanter, stalking swiftly back to the house. His gaunt, unshaven face relaxed into a malicious sneer as a chorus of "whir-r-r! whir-r-r!" rose from the wheat-field.

"I rejoice that these revelers find something unattainable," he muttered; "it is a downfall and a wound to their evil pride."

Meanwhile, young Peyton had reached his home and, throwing his reins to a servant, walked up on the wide piazza, where the family and a half dozen guests were assembled.

"Good news!" cried the group. "Manning has come!"

"Manning? Why, that's fine!" said the lad, heartily. "Oh, there he is now! Hallo, Manning! Paris hasn't spoilt you for home, eh?"

Manning, tall, slender, elegant, answered Peyton's warm hand pressure with a grasp as earnest; but the newcomer's voice was drawling in affectation as he returned, with a faint shrug:

"Not much difference between one place and another. They are all fatiguing. I've not been so exhausted in years."

The weary droop of his eyelids gave point to his words as he came lazily out on the piazza. He sank, with a poise almost effeminate, into a wide rocker, his long white fingers resting idly in his lap.

Peyton laughed.

"You've not changed a bit, Jack Manning. Too bad you're so fatigued! Listen, all of you—I've just come from a raid on Praise-God Barebones. You know I said I'd have that shooting if it cost the price of six horses."

"Nothing like getting what you go after," drawled Manning, "especially with so amiable a neighbor."

"But I didn't get it," confessed the lad, pulling a rueful face. "He threatened to pepper my jacket with shot if I came near him again, and I had to fight him off all the way to the gate—regular fencing match."

"With the pretty Ailsie looking on?"

"Exactly! And he announces publicly that he will shoot any man who says 'chicken' to him again. The king himself couldn't get a day's sport in those fields."

"But some one else might," insinuated Manning, softly.

Something in his tone irritated the lad.

"I'll wager Centaur, my brown gelding, and his dam against a button that you can't, anyway!"

"Not against a button," said Manning, lazily, "but against their worth, at whatever figure you please. And the time?"

"Set it yourself," returned Peyton; "only I warn you I'm sure to win."

"Shall we say to-morrow?" The weather is superb. To-morrow I promise you I will bring a bag of chicken from Mr. Cameron's fields to Cousin Lucy." His eyes turned affectionately to his hostess.

But that lady protested in alarm.

"No, no, Jack! I'll not have it! You mustn't go near the man. He is thoroughly dangerous. I've lived here twenty years and I know his record."

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"Just to please you, Cousin Lucy," returned Manning, gently, "I'll promise not to get hurt."

"Besides, this is no time to think of sport," chimed in a bright-faced, red-lipped girl. "There's the great Woodlawn ball to-night. And you are home just in time for it. You must show me the latest step from Paris."

"Delighted!" murmured Manning, with a leisure that bore a different implication. But Mary Arden did not heed it. She was a thorough coquette, a petted beauty, herself accustomed to hunting—only the game was not chicken.

That night she regarded her new partner with much satisfaction as he approached; his grooming was perfect; and his effeminacy was half drowned in his lazy grace.

Manning, now in his twenty-fifth year, had been abroad since the completion of his college course, and Peyton feared that his cousin had been undone indeed by an overdose of Europe.

"He must have lost off in everything," the boy muttered, "he's so lackadaisical! Cameron will do him up with one finger. I'd no business making that wager. I'll keep an eye on him. I don't want him killed."

It was with this philanthropic purpose that Peyton mounted his gray about six o'clock next morning, having drawn from Manning that he meant to tackle the Coven-

anter near that hour. Manning had gone home with a friend, who owned an irreproachable brace of setters. Peyton himself had not been to bed at all, but had had time enough to change his elaborate suit for his riding-clothes before he rode out into the freshness of the morning.

He had just reached a hillock, near the Cameron yard, wherein he could see without being seen, and was halting to reconnoiter, when he saw the farmer stride down to the gate, about to ride out to a far field.

Then both Covenanter and Cavalier opened their eyes in amazement.

For, from the opposite direction, a figure came stepping daintily down the road, a tall, slenderly elegant figure, lifting shining, be-ribboned shoes uneasily from the dust. The newcomer halted opposite Mr. Cameron, and the Covenanter stared with astonishment at the incongruous clothing of the stranger.

For the latter seemed just to have left the ballroom, except that he carried a gun. In his exquisitely ruffled shirt-front a diamond flashed; the purest of pearl buttons glistened and gleamed on his full-frocked, sky-blue coat; his satin small-clothes shone in the sunshine; his well-turned calves were covered by a pair of immaculate silk stockings, gartered with love-

knots of pale-blue ribbon. Below his stockings sparkled jeweled pump buckles.

"Aw—good morning," he drawled softly to the Covenanter. "The roads are monstrous soiling this morning. Is it always so wet in the grass?"

"Wet?" the farmer stared; "that's dew—have ye ne'er seen dew afore?"

"I've read about it," confessed the stranger. "How pretty it is! But never mind." He glanced back uncomfortably at the dogs behind him. "Do you think they bite?"

"You should know. Are they not yours?"

"They are merely borrowed," announced the other, twitching back one foot as the dogs snuffed at his ankle. "You see, sir, I'm but just over from Paris. They tell me a man must hunt here. So I got these dogs and this"—he held it off suspiciously—"this gun."

The befrilled and helpless figure, the suspected dogs, the gun held so doubtfully, were too much for Cameron. He burst into a fit of laughter.

When he recovered himself he asked, half choked:

"And where will ye hunt?"

"I came to consult you," confided the stranger. "I will pay you a hundred dollars for a day in your fields, unless," he added, anxiously, "unless you think I might kill too many birds?"

Cameron roared again.

"I dinna think ye wull," he remarked, when he was able. "I wish I had a glass case to keep ye in an' time to set an' luke at ye and the dogs—an' ye to keep the gun aye in that manner! Too many birds? A hundred dollars? I hae aye said no mon should hunt my fields—but I dinna think ye come in yon noun's catagorry."

The stranger took no offense at this.

"Will it be very damp?" he inquired, nervously.

"Na, na," said the other, encouragingly. "Ye will have a braw time, especially when ye cross from one field to another. Them stockings are just the things for chickweeds. Come awa' with ye!"

The Covenanter and his protege disappeared together, the latter's smooth-shaven face eloquent of uneasiness—while, from a certain hillock, a youth rode away in a speechless condition.

"But he's still got to get his birds," muttered Peyton. "A bagful was the wager, and I bet he don't hit one! Hi, there, sir—where you the deuce you goin'?"

A small, red-headed, bow-legged boy of twelve grinned broadly.

"Gwine to carry birds fo' Master Jack—he done told me whar to fin' him."

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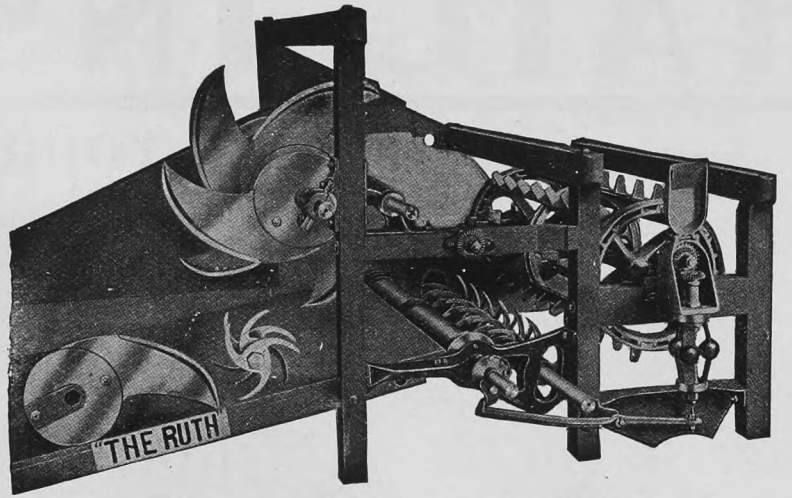
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Cameron placed the would-be sportman, and then rode away chuckling, the hundred dollars in his pocket.

It was some time before he reached the far field; but all along the road he heard sounds that told him that the stranger had at least screwed up courage to burn powder. The shots came at rapidly successive intervals.

At ten o'clock Cameron was still away, when he saw one of the house servants flying toward him.

"What are you doing out here?" inquired the Scotchman, sternly.

"Oh, sir," gasped the servant, who chanced to be the family butler, "I done sneak across to de fields, to see what all dem shots mean. Sir, you better come home an' stop that man! He killin' ebberry thing in sight. That little Snowball he has with him to kyarry his birds is tyin' dem po' servant on strings an' wroppin' 'em all round him. Sir, dat little servant fa'ly covered wid fadders—he doan look human!"

"I don't believe it!" shouted Cameron. "That, that—thing—couldn't shoot!"

Nevertheless he galloped home, and hurried to the field of action.

A paralyzing sight met his eyes. The stranger still stepped daintily; his amazing costume was still, except for some damage to his stockings, quite immaculate; but his gun was now carried very differently.

He nodded curtly to Cameron, but capped and reloaded his gun meanwhile with lightning despatch.

The dandy moved toward the dogs, a few birds flushed, there came two puffs of smoke almost simultaneously. Two birds fell. The dogs retrieved, the birds were handed to Snowball, and even before Cameron could pull himself together the performance was repeated with mechanical precision. No haste on the man's part, faultless action by the dogs, a very trinity of destructive perfections—man, dogs, and gun.

Cameron turned in horror to Snowball, and found the little servant's grinning countenance capping a thatch of birds, tied round him in every conceivable manner; a very peripatetic pyramid of feathers.

The despairing Covenanter shouted to the sportsman:

"Stop, or I'll hae no birds left! Stop, i' the name o' Providence!"

"Why should I?" inquired the sportsman, pausing a moment. "Never had better sport in my life!"

"I'll gie ye back part of your money."

"Thanks—I've no use for it."

"All o' it, then—ye'll nae leave aye bird!"

"I've no use for money—it's the root of all evil."

"De'il hae—and the Lord forgi'e me for swarin'. What wull stop ye?"

"Five minutes' conversation with Miss Ailsie."

"A crack wie my dochter—ye scatter-brained gowk! Never!"

Crack went the gun, the dogs retrieved. The birds were handed to Snowball, who disposed of them joyously about his person.

"Stop—ye wild ne'er-do-weel! What for should ye want to see Ailsie?"

"I used to know her a little, when we were children."

"Ye talked by stealth then. An' since she's grown up I've forbade her all havers with you godless Episcopalians."

"All right. No use talking then. I'm busy."

Two puffs of smoke jetted out, several feathered forms whirled madly and came plunging down, the dogs retrieved, the enriched Snowball received them and girded his thighs as a bee does with her treasure.

Cameron yielded.

"Stop, ye mad satin-broke de'il! Come i' the house then, and crack wi' Ailsie if ye must."

Something of Interest to Everyone.

There is no kind of roofing quite as cheap in the end as one which can get along without having to be painted. Such a roofing is Amatite. This roofing has a mineral surface, which is much more durable than paint, and as a result Amatite does not need any paint at all.

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The manufacturers of Amatite will be glad to send you a Free Sample. Address the nearest office of the Barrett Manufacturing Company, New York, Chicago, Cleveland, Allegheny, Kansas City, St. Louis, Minneapolis, Philadelphia, New Orleans, Cincinnati.

Blasting a Big Bluff.

It took 1,400 kegs of giant powder, poured into hundreds of holes drilled deep into the bluff for four months, but when the contractor touched the button, literally, the whole thing toppled into the Columbia river. All this happened opposite "Eighteen Mile Island," on the line of the new Portland and Seattle which "Yem" Hill is pushing down along the north bank of the Columbia. It cost \$6,000 to call that bluff, but the show-down was well worth the price, for now instead of an expensive tunnel, simple grading is all that is necessary at that point.

THE star cow of any man's dairy is the one that gives the most and the best milk, and keeps it up the longest. By this test every one of us may test our herds. And when we have found out which one is the best, let's try to bring all the rest up to her standard.

Grain Letter.

Winnipeg, May 28th, 1907.

Developments in the grain situation during the past few weeks, have proven the correctness of the advice given in these columns in our last issue. The damage to the growing crops practically the world over, from different causes at that time, has since been amply verified. On the Continent a large area of the fall sown wheat was winter killed, and with the cold, backward spring and continued dry weather the crop in the principal wheat producing countries of Europe has suffered to such an extent that at the present time the most reliable estimates make the wheat crop of Germany, Roumania, the Danube, Hungary and South Russia at the very least 40% below an average crop.

In North America the same cold, backward weather conditions have existed to a great extent and heavy frosts have continued at intermittent intervals right up to the present time, these frosts reaching south into the winter wheat States of Kansas and Nebraska where what is left of the crop from the effects of continued dry weather and the ravages of the green bugs, is said to have received a further setback from this cause, and good authorities are now placing the crops of those two States at about 75% of a crop for Nebraska, and about 50% of a crop for Kansas.

As yet it is utterly impossible to make any calculation on what the spring wheat crop of North America will amount to, but owing to the general lateness of the seeding this crop will require exceptionally favorable weather to insure its maturing in time to escape frost next fall. June weather will be the prime factor in making the spring wheat crop of this country, and we feel safe in saying that unless this crop is favored with sufficient moisture and warm, forcing growing weather you will see prices assume a considerably higher level later on in this season.

Just at the present moment there is no scarcity of supplies of wheat for immediate consumption, but these supplies are being heavily drawn upon and in some instances have dwindled to rather small proportions, and holders have advanced their prices accordingly. Russian shipments have fallen off heavily and our advices are that all contracts for further shipment have been cancelled wherever it was possible to do so. Indications are that there are not over 30,000,000 bushels surplus left of the Argentine crop, and with Germany, the United Kingdom, Italy and Mediterranean ports all pulling at this it cannot last much longer. Australia has only a small portion of her surplus left and the West

THE NORTHWEST DOUBLE CYLINDER CROSS COMPOUND HEAVY TRACTION ENGINE



It Is the Only Kind of Engine Ever Built that Could Do the Stunt.

51 Horse Northwest Double Cylinder Cross Compound Engine hauling ten traction engines and one separator. Total weight of load exclusive of the working engine 266,765 lbs. Over one hundred thirty-three (133) tons. The ten dead engines are all in gear acting as a brake, making the load much harder to haul. The distance between the live engine and the rear load is 284 feet.

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Northwest Thresher Co. - Stillwater, Minn., U.S.A.

CANADIAN BRANCH, Brandon, Man.

Stillwater, Minn., April 12, 1907.

I, John M. Maier, of Canby, Minn., was present at the works of Northwest Thresher Co., Stillwater, Minn., on April 12th, 1907, and saw one 51 H. Northwest Cross Compound engine pulling 10 other Northwest engines, ranging from 25 to 34 H. P., all being in gear and a Northwest separator was also hitched on the rear end of the last engine, making a total number of eleven (11) engines and one separator in line all moved by first engine which was the only one steamed up.

(Signed) JOHN M. MAIER.

Stillwater, Minn., April 12, 1907.

We, the undersigned, witnessed the magnificent sight of one Northwest Traction Engine pulling ten other engines and one separator on April 12, 1907. After being photographed the whole train was again started by the one engine and hauled to the warehouse with apparent ease.

(Signed) H. W. DAVIS
M. C. McMILLAN
ELLA DUPUIS
CLARENCE LEWIS

Coast of South America is at present bidding above all other countries for that wheat. The demand for the Orient still continues, and South Africa will also remain steadily in the market.

On the Winnipeg market the demand for cash wheat has shown a considerable improvement with the freer movement of wheat from the lake front. The demand for both oats and barley continues firm at stiff prices.

Market closed to-day as follows
Wheat, May delivery, 91½¢, July, 92½¢, October, 94¢; Oats, May, 41½¢, June, 41½¢, July, 41½¢, October, 37¢.

Cash values in store Fort William or Port Arthur—Wheat, No. 1 Hard, 92½¢, No. 1 Northern, 91½¢, No. 2 Northern, 88½¢, No. 3 Northern, 84¼¢; Oats, No. 2 White, 41½¢, No. 3 White, 40½¢, Barley, No. 3, 50¢, No. 4, 49¢, Flax, No. 1, \$1.32.



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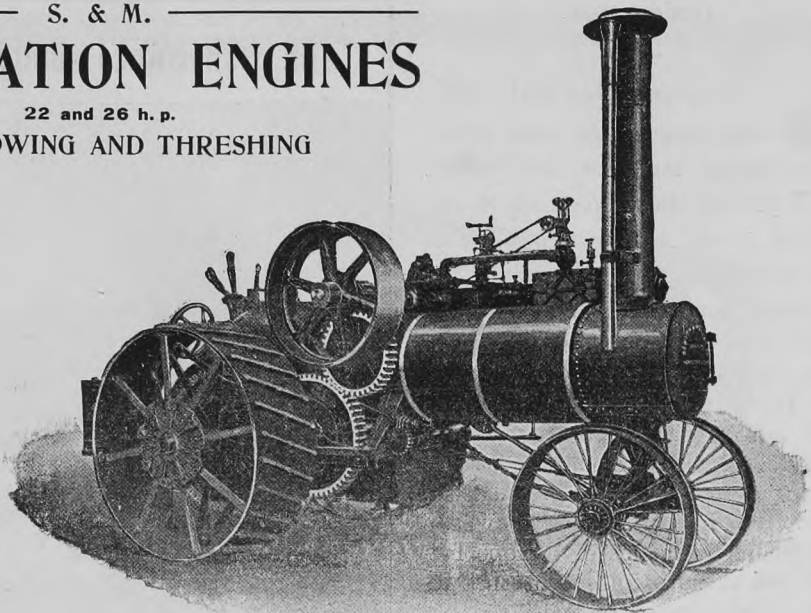
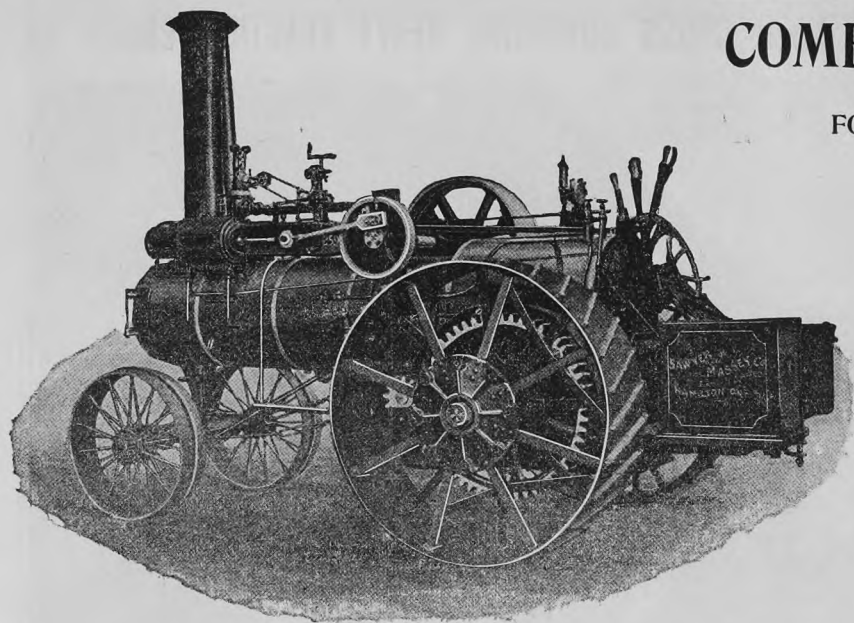
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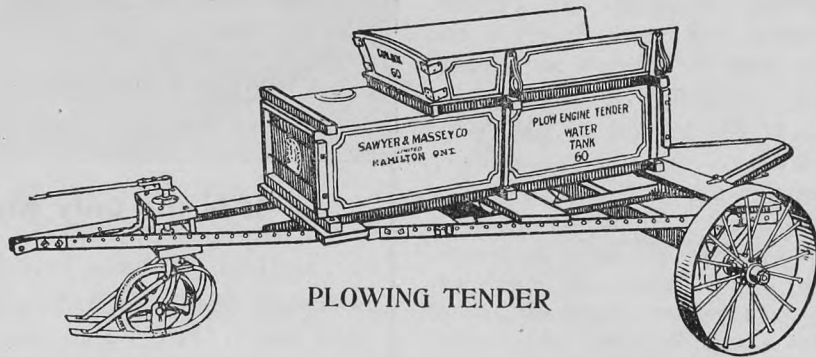
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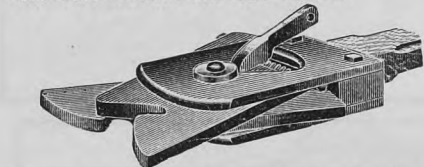
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Before purchasing your supplies for the coming season send for our new Catalogue. The many bargains we offer will surprise and please you.

Our VETERAN DRIVE BELT is by all odds the very best Drive Belt made. It has 15 per cent. more rows of stitches than any other makes, it is from 5 to 10 pounds heavier and is fully 20 per cent. stronger and more durable. We have been selling them for 7 years now, and practically all those first sold are still working and in good order. Notwithstanding, we are selling these VETERAN BELTS this year at about the same prices others charge for common ones. In Canvas Covers, too, we have extra good values. The 18x30 ft. 10-oz. cover we sell for \$16.10. Other sizes in proportion. Best Tank Pump \$6.75. 2 in. wire lined Suction Hose 37c per ft. 2 in. wire lined, canvas covered Suction Hose 50c per ft. (see cut). These are only sample prices.



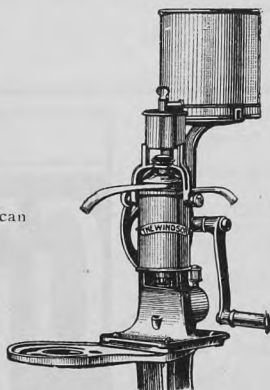
PRICES: 650 Cylinder Oil, per bbl \$18.00. Castor Machine, gallon 30c. Red Engine, gallon 30c.



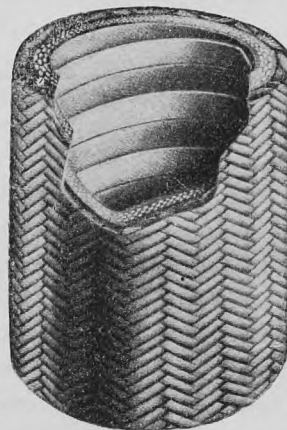
Johnson Automatic Engine Coupler—Best Coupler made Price \$6.00



Veteran Belt Dressing—2 lb. can price \$1.00.



Cream Separators at 1/2 price. Write for descriptive circular.



Wire Lined Suction Hose



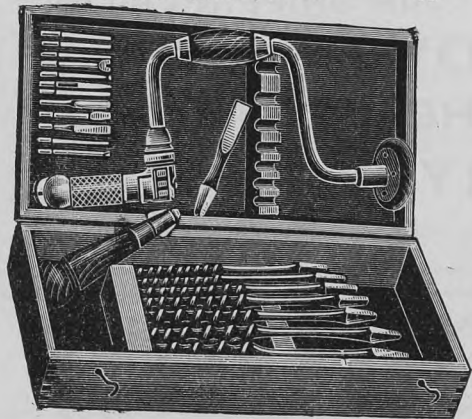
We issue a special Sewing Machine Catalog. Prices from \$15.00 up to \$35.00.



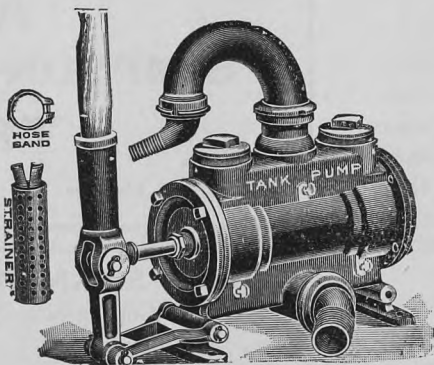
Thresher Teeth only 7c each



Bar Belt Dressing—1 lb. stick, price 50c



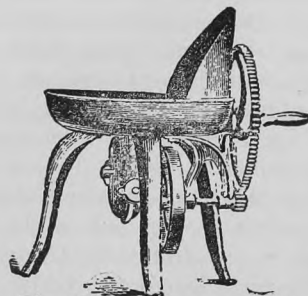
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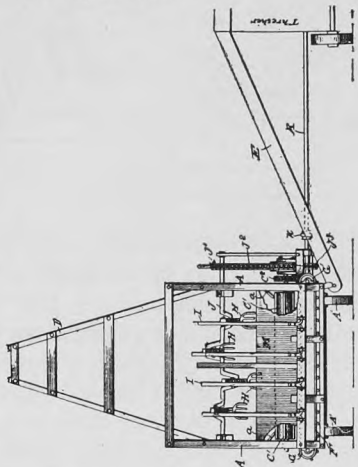
WINDSOR SUPPLY COMPANY

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Current Patents

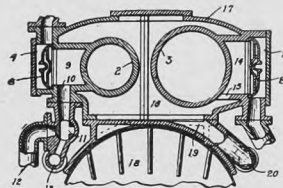
Compiled Monthly from the Official Gazette
of the U. S. Patent Office.

848,577. PORTABLE FEEDER FOR THRESHING-MACHINES. DAVID STILL, Milton, Oreg. Filed Mar. 20, 1906. Serial No. 307,009.



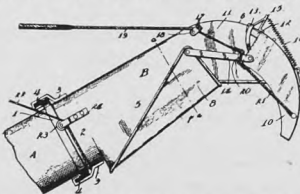
Claim.—1. A portable feeder for threshing-machines comprising a wagon-like body having a slatted and endless longitudinal apron in its bottom, a transverse apron at the end thereof at a lower level, an external power-transmission shaft, driving-gears for connecting the same to the two aprons and means for interrupting the transmission of power to the longitudinal apron without affecting the movement of the other.

847,712 CYLINDER STEAM-JACKET. GEORGE E. WILSON and WILLIAM J. FRAWLEY, Stillwater, Minn. Filed Feb. 6, 1906. Serial No. 299,802.



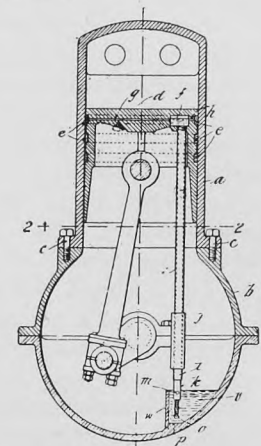
Claim.—The combination, with a traction-engine boiler, of a casing mounted thereon, high and low pressure cylinders arranged side by side in said casing and spaced from one another and from the walls of said casing, said cylinders having steam-chests and valves therefor in the outer side walls of said casing and cavities located between said valves and cylinders and communicating with said chests through said valves, the chamber or space within said casing extending partially around said cylinders and cavities, the cavity of said high-pressure cylinder having a pipe leading to the steam-chest of said low-pressure cylinder, and said low-pressure-cylinder cavity having a port leading to the interior of said casing whereby the exhaust of said low-pressure cylinder will be admitted to the chamber or space within said casing and conducted around said cylinders to reduce radiation and condensation thereof, and a pipe leading from said casing to the boiler-stack and whereto the exhaust is finally delivered, substantially as described and for the purpose specified.

845,876. HOOD FOR STACKERS. ABRAHAM LUKE, Elkhart, Ind. Filed May 17, 1905. Serial No. 260,907.



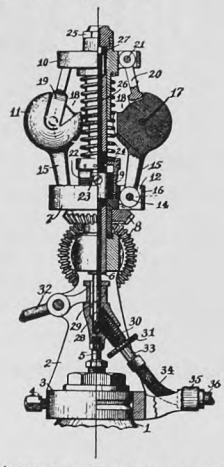
Claim.—1. A hood for stackers comprising a body portion having an opening therein, an apron movably secured to the body portion and extending partially across the opening, a bill movably connected to the body portion and constituting a continuation thereof, means connecting the bill and apron and means for adjusting the bill and apron to increase or decrease the size of the opening.

846,967. POSITIVE-FEED LUBRICATOR. JOSEPH H. WESSON, Springfield, Mass. Filed June 7, 1906. Serial No. 320,549.



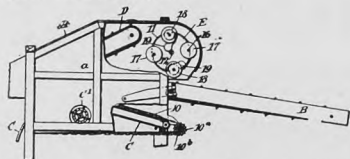
Claim.—1. In a lubricator, a piston-head, a pump carried by the piston-head and having an inlet, a piston for sweeping across the inlet and actuated by the piston-head, a valve between the inlet and the piston-head whereby when the pump is carried into a reservoir of oil a definite amount of the same is forced by the piston to the piston-head, as described.

841,832. CENTRIFUGAL GOVERNOR. CHARLES N. WALSH and WILLIAM N. RUMELY, Laporte, Ind. Filed Apr. 7, 1906. Serial No. 310,405.



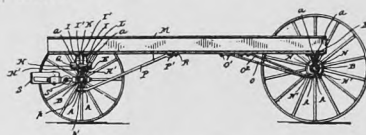
Claim.—1. A governor comprising a governor-ball with an arm to engage a pivot and having its periphery provided with a gap, a yoke arranged for swinging motion in said gap and provided with an arm for a pivot and having an exterior surface corresponding substantially with the spherical exterior of the ball, and a pivot uniting the extremities of the yoke to the ball, combined substantially as set forth.

846,377. BAND-CUTTER FOR THRESHING-MACHINES. MARTIN C. ALBERTSON, Oakes, N. D. Filed Mar. 3, 1906. Serial No. 304,039.



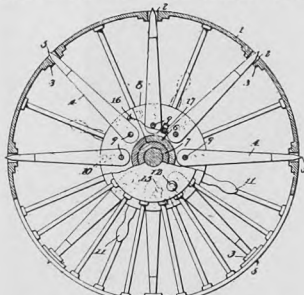
Claim.—1. In a band-cutter for threshing-machines, a shaft, a driver for the shaft, a frame secured on the shaft, comprising opposing heads, shafts mounted to turn in the said heads, disk cutters secured on the latter-named shafts, brake-disks secured on the shafts journaled in the said heads, and gravity friction-brakes for the said brake-disks, pivoted upon said heads.

847,647. GASOLINE ENGINE TRUCK. ADDISON N. CALKINS, Quincy, Ill. Filed Apr. 16, 1906. Serial No. 312,002.



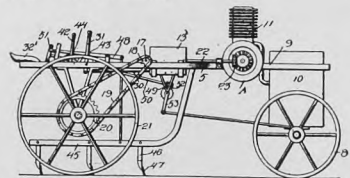
Claim.—1. In a truck for gasoline-engines, the combination with the longitudinal channel-iron beams, the rear axle rigidly connected with said beams and the front axle connected with said beams by a universal-joint connection, of a diagonal brace joined to the center of the front axle at its forward end and joined at its rear end to a transverse brace between the longitudinal beams; substantially as described.

846,689. TRACTION-WHEEL. JOSEPH MCNEAL, Laporte City, Iowa. Filed June 9, 1906. Serial No. 321,083.



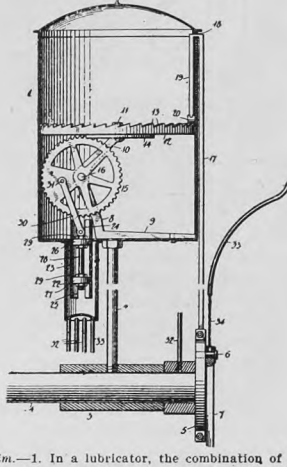
Claim.—1. A traction-wheel having openings at its rim, tractors having ends located in said openings, a plate rotatably mounted upon the wheel-hub, said plate having perforations which extend in radial lines with relation thereto, and means for securing the inner ends of the tractors to said plate at the said perforations thereof.

847,026. MOTOR-DRIVEN FARM IMPLEMENT. MELVIN O. SANDBERG, Granite Falls, Minn. Filed Sept. 13, 1906. Serial No. 334,518.



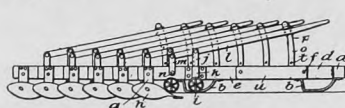
Claim.—1. In a machine of the class described, the combination with a frame, of a motor in the frame, steering-wheels at the forward end of the frame, steering mechanism connected with the wheels, a gear-box in the frame, power-varying gear within the box, said gear including a shaft extending outwardly of the box, transversely of the machine, connections between the motor and gear, a counter-shaft journaled transversely of the machine, a differential gear for the counter-shaft, connections between the first-named shaft and the counter-shaft, drive-wheels for the frame, sprockets carried by the drive-wheels, sprockets carried by the counter-shaft, chain connection between the sprockets of the drive-wheels and counter-shaft, a seat at the rearward end of the frame, and a steering-wheel connected with the steering mechanism and lying within reach of the seat.

847,898. LUBRICATOR. THOMAS E. BROOKS, Chicago, Ill. Filed Apr. 9, 1906. Serial No. 310,875.



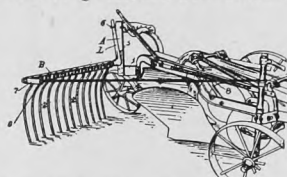
Claim.—1. In a lubricator, the combination of a reservoir, simultaneously-movable valves to control the discharge of lubricant therefrom, a gear-wheel in said reservoir, a connection between said gear-wheel and said valves to operate the latter, a disk in said reservoir having a worm engaging said gear-wheel and also provided with ratchet-teeth, a rocking element, and a dog carried thereby to engage said ratchet-teeth for the purpose set forth.

846,643. GANG-PLOW. GEORGE BISHOP, Oxbow, Saskatchewan, Canada. Filed Mar. 28, 1906. Serial No. 308,573.



Claim.—1. In a gang-plow the combination with the frame of rearwardly-extending beams pivoted to the same, plows secured thereto, gage-wheels, standards supporting the gage-wheels and slidably supported on each beam, levers for raising and lowering the gage-wheels, arc-shaped arms secured to the beams, sliding blocks on the arms having therein slots into which the levers fit and thumb-screws for retaining said slots in any adjusted position as and for the purpose specified.

844,084. PLOW ATTACHMENT. EMERSON B. BARROWS, Sandwich, Ill. Filed Sept. 26, 1906. Serial No. 336,233.



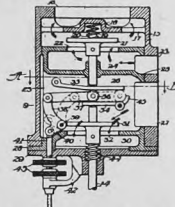
Claim.—1. The combination with a plow, an arm secured thereto and an upright extending upwardly from the arm, said upright having an elongated, vertically-disposed slot at or near its lower edge with a tooth-supporting bar and teeth secured thereto, one end of said bar extending through the slot in the upright, a lever secured to the bar and means at its upper end for connecting it to the upright.

847,813. FLUE-CLEANER. ELWOOD C. PHILLIPS, Chicago, Ill. Filed Sept. 7, 1906. Serial No. 333,667.



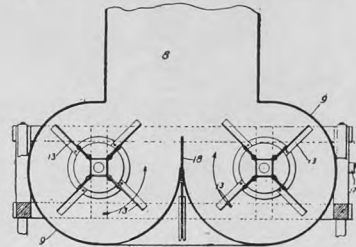
Claim.—A flue-cleaner of the class described comprising a rod, an inner head secured thereto, an outer head and a plurality of resilient spirally-disposed blades having their ends crimped and embedded rigidly in the inner and outer heads, the outer head being supported solely by the said blades.

845,159. GAS-ENGINE. WILLIAM K. ANDREW, Milwaukee, Wis., assignor to International Harvester Company, a Corporation of New Jersey. Filed Nov. 26, 1906. Serial No. 345,246.



Claim.—1. In combination with a gas-engine, a throttling-governor comprising a cylindrical valve-chamber containing separate gas and air chambers having open ports communicating with a source of gas and a source of air supply, respectively, other ports opening out of said chambers, valves controlling said last-named ports, a speed-governor mechanism operatively connected with said valves in a manner causing them to close the ports, and an adjustable lever connection between said valves operative to regulate their relative movement.

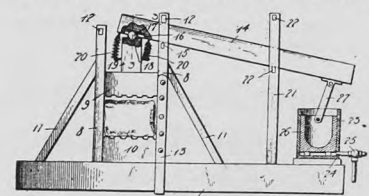
848,172. WIND-STACKER. ROBERT R. HOWELL, Minneapolis, Minn. Filed May 31, 1904. Serial No. 210,374.



Claim.—1. In a separator, the combination, with a straw-rack, of a trunk arranged to receive straw therefrom, a stacker-tube communicating with said trunk, a fan-casing having a hopper-feed opening and a discharge throat or passage leading into said trunk opposite the opening in said stacker-tube, blast-fans provided on the same level in said casing and revolving toward each other, and an adjustable slide interposed between said fans in said casing.

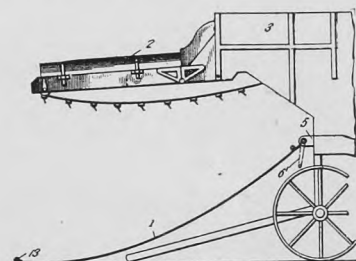
844,751. BALING-PRESS. FRANK S. ROBINSON Natchez, Miss. Filed Oct. 22, 1906. Serial No. 339,975.

Claim.—In a press, the combination with a plunger, of



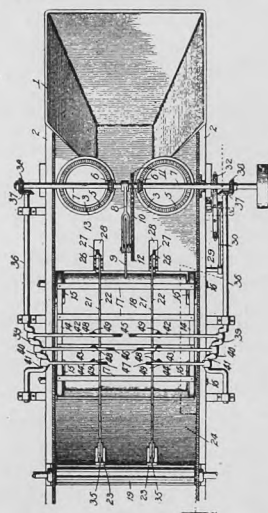
an operating-lever connected thereto, the lever and plunger having opposite sockets one of which is elongated, and a ball in said sockets.

847,875. ATTACHMENT FOR THRESHING-MACHINES. GEORGE S. ANGER, Schaller, Iowa. Filed June 13, 1906. Serial No. 321,478.



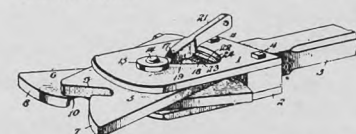
Claim.—An attachment for threshing-machines comprising a flexible sheet, a distending-bar for each end of said sheet, each of said bars having folded sections, and means carried by the threshing-machine for supporting the sheet, said means being operable to wind the sheet about said means.

846,423. FEEDING MECHANISM FOR CORN-HUSKING MACHINES. JAMES W. PAIGE, Chicago, Ill., assignor, by mesne assignments, to Garland-Vila Manufacturing Company, Muskegon, Mich., a Corporation of Maine. Filed Feb. 15, 1906. Serial No. 301,231.

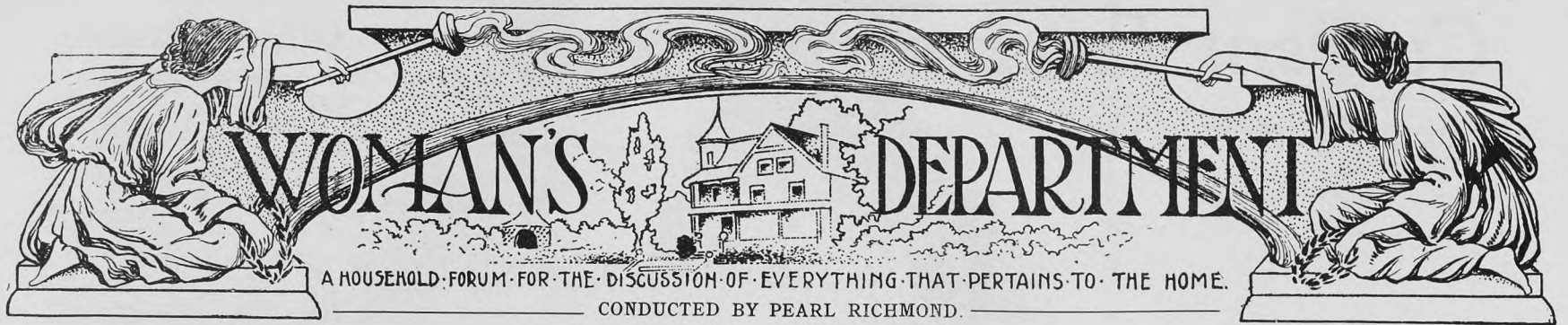


Claim.—1. A feeding mechanism for corn-husking machines, in which is combined means for advancing the stalks, a series of distributing-rakes arranged to move laterally in opposite directions from opposite sides of the machine and means for imparting an increasing length of stroke to said rakes in the order of their succession.

844,522. COUPLING FOR TRACTION-ENGINES. RICHARD JOHNSON, Sr., Freeport, Ill. Filed Apr. 25, 1906. Serial No. 313,614.



Claim.—1. In a car-coupling, the combination of a draw-head, a pair of jaws pivotally mounted in the draw-head and movable simultaneously and independently, one jaw being arranged above the other, and locking means carried by the upper jaw for engaging the lower jaw, whereby the jaws are locked in their closed position, said locking means, when released, permitting both jaws to open.



Two Women.

One sanctified her homely household labor
With patient kindness, and with tender grace;
Love set his seal upon her faithful service;
Sweet peace and joy illumed her placid face.
Her presence seemed to those for whom she wrought
With blessing and with benediction fraught.
The other toiled with fretful, weak reining,
Sullen of visage, cheerless, heavy-eyed.
Missing the joy of love's unselfish labor,
"I weary of this ceaseless toil," she cried;
"I hate these narrow walls and duty's chains,
And long for broader fields and higher plains."

One caught the morning sunlight on the mountain,
The noontide splendor and the twilight's spell;
And heard with joy Creation's vocal anthem.
The other walked alone where shadows fell.
One face uplifted shone with Heaven's own light,
The other downcast, made of noonday night.
—Elizabeth Clarke Hardy, in Good Housekeeping.

The Bravest Battle.

The bravest battle that ever was fought,
Shall I tell you where and when?
On the maps of the world you will find it not;
'Twas fought by the mothers of men.
Nay, not with a cannon or battle shot,
With sword or nobler pen;
Nay, not with eloquent words or thought,
From mouths of wonderful men.
But deep in a walled-up woman's heart—
Of woman that would not yield,
But bravely, silently bore her part—
Lo, there was the battlefield.
No marshaling troops, no bivouac song,
No banner to gleam and wave;
But, oh! these battles, they last so long,
From babyhood to the grave.
Yet faithful still as a bridge of stars,
She fights in her walled-up town—
Fights on and on in the endless wars,
Then silent, unseen—goes down.
O, ye with banners and battle shot,
And soldiers to shout and praise,
I tell you the kingliest victories fought,
Were fought in these silent ways.
O, spotless woman in a world of shame!
With a splendid and silent scorn,
Go back to God as white as you came,
The kingliest warrior born!
—Joaquin Miller.

The Valiant.

By M. A. DeWolfe Howe.

Not for the star-crowned heroes, the men
that conquer and slay,
But a song for those that bore them, the
mothers braver than they!
With never a blare of trumpets, with never
a surge of cheers,

They march to the unseen hazard—pale,
patient volunteers,
No hate in their hearts to steel them—
with love for a circling shield,
To the mercy of merciless nature their
fragile selves they yield.
Now God look down in pity, and temper
Thy sternest law,
From the field of dread and peril bid
Pain his troops withdraw!

Then unto her peace triumphant let each
spent victor win,
Though her life be bruised and trem-
bling—yet, lit from a flame within
Is the wan, sweet smile of conquest,
gained without war's alarms,
The woman's smile of victory for the
new life safe in her arms,

So not for the star-crowned heroes, the
men that conquer and slay,
But a song for those that bore them, the
mothers braver than they!

The Japanese Farmer's Wife.

If the lot of a Japanese farmer be
hard, that of his wife is infinitely
harder. She not only does an equal
amount of labor in the field, but the
care of the household and the respon-
sibility of the children also rest upon
her shoulders.

From earliest infancy a Japanese girl is taught to be obedient to her parents; and when she is about to be married, her mother gives her thirteen rules by which to steer her bark on the rugged sea of Japanese married life. Among them are the following: "Be always kind to your mother-in-law and sisters-in-law." "Get up early, stay up late at night, and do not take a nap in the daytime." "Be a good housekeeper, be economical in everything." It is well for the happiness of the girl who is about to become a farmer's wife that the last two commandments have been so instilled that she is prepared to regulate her life by them.

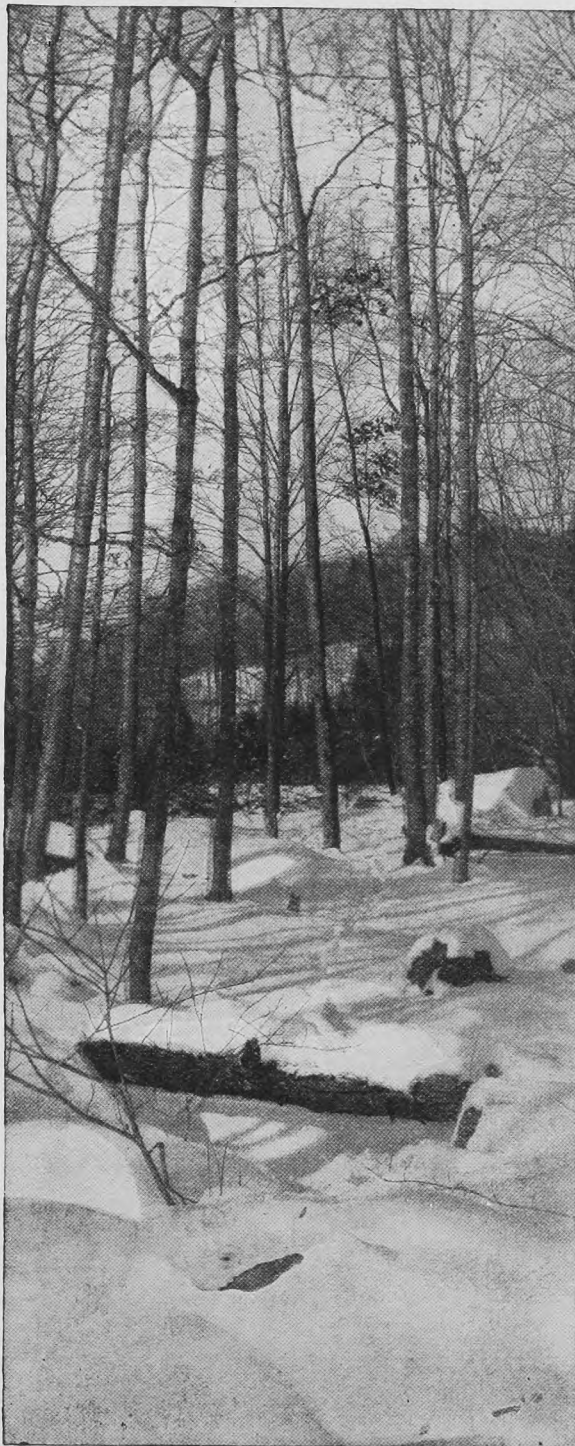
The first to rise, she is sure to be the last to retire; and when the male members of the family may be seen stretched on the floor taking their siesta, the patient housewife may be seen mending some garment or else laboring in the field. It is scarcely necessary, however, to train her to be economical, for that is compulsory.

Before the farmer has awakened from his heavy sleep, his little wife creeps from under the mosquito net, and, performing a hasty toilet, prepares the morning meal. When the older members of the family arise, the beds, which are heavy quilts placed on the floor, are carefully rolled up by the busy housewife and placed in the closet, there to remain until again required.

As there is so little furniture used in a Japanese house, and especially in that of a peasant, one would naturally think that the domestic duties would be very light. Such, however is not the case.

When the bedding has been removed, the meal is then served in the same room. All the members of the family squat on the floor. The millet or rice, which is the principal, and oftentimes only, article of diet, is brought in in a wooden bucket, and the wife ladles it out, serves her husband first, and oftentimes waits until the whole family has finished before she partakes of the food herself.

When the husband has gone to the field, the wife removes the dishes and washes them, together with any pots that may have been used, at the neighboring well or in the stream that flows just outside her cottage door. These canals or streams are a great labor saving institution in Japan, and are used for



Courtesy Outing.
WHEN WINTER HOLDS SWAY.

many and various purposes. The farmer, tired and dirty after his day's work, refreshes and cleanses himself by a plunge into the running water. As one travels through the country at one point one may see a woman doing the family washing in the stream. Farther down the road the tired, travel-strained pilgrim may be seen refreshing his weary feet by them in the same water. At other points travelers slake their thirst, dusty urchins disport themselves, and the over-worked wife cleanses her dishes in it.—The Pilgrim.

Renovating Non-Washable Fabrics.

By Constance Fuller McIntyre.

It is astonishing the transformation that can be brought in a piece of half worn velvet by taking a little pains with it. In a discarded velvet toque, for instance, ripped up, there are quite large pieces of really good velvet, but because they are somewhat crumpled and crushed many people regard them as of little or no further use, and even where they would press odd pieces of silk and use them again for linings, velvet seems of use only for the children to cut up into dolls' clothes.

First of all thoroughly brush each piece and pick out the threads. Get a hot iron and an iron ring, such as darkies use in the South to rest their irons on, and place the iron in it bottom upwards. Then a piece of old, white calico, or similar fabric and a bowl of water. Dip the cloth in water, wring it out and place it over the iron; then, very quickly, before the hot iron has time to dry up the dampness, place the velvet, right side up, over it. The pile will rise instantly, all the little creases and crushed spots disappearing as if by magic.

Repeat this process, wringing the piece of calico out, or moving a fresh wet space over the iron, and putting another portion of the velvet over it until all the pieces are done.

These pieces of velvet being mostly cut on the bias are useful in numberless ways. One ripped velvet toque trimmed prettily a winter coat for a small boy, made a large, round cap to match, which no one could distinguish from perfectly new velvet. There was enough left to make pipings for a dress.

Velvet ribbons are less trouble to iron as, since the crumpled places may be dampened on the satin side, it is not necessary unless the ribbon is very much creased to use a damp cloth. A crushed spot on a lined velvet coat or dress can be removed by holding the place, right side up, over a basin of boiling hot water, which raises the pile of the velvet again at once.

Where an iron ring, or something similar to hold the iron in place, is not at hand it takes two people to iron velvet, one to hold the iron while the other manipulates the velvet.

Where dresses have been badly packed and come out of a trunk crumpled, it is not necessary, with woolen goods, to iron out the creases. Merely hang them in front of a fire for fifteen minutes or so, and the heat will take out the creases. This is also often sufficient to remove clean grease spots. The fire draws the grease out of the fabric until, gradually, all trace of it disappears. This is less troublesome than the time honored method of putting blotting paper over the spot and holding a hot iron over it without touching the blotting paper.

A lady I knew received from a firm of tailors a new suit with a large grease spot, evidently machine oil, in the middle of the front width. Naturally she was much annoyed, and expressed it back to them. But no trace of it would have remained after holding it to the fire, which was all the company did before returning it again to her.

It is a mistake to try to wash white woolen knitted or crocheted shawls, as they seem to lose in the process all the light fluffiness that makes them pretty, shrinking so as to leave large holes. They should be cleaned by rubbing lightly in flour or cornmeal, taking a fresh supply of flour as soon as it becomes soiled until the

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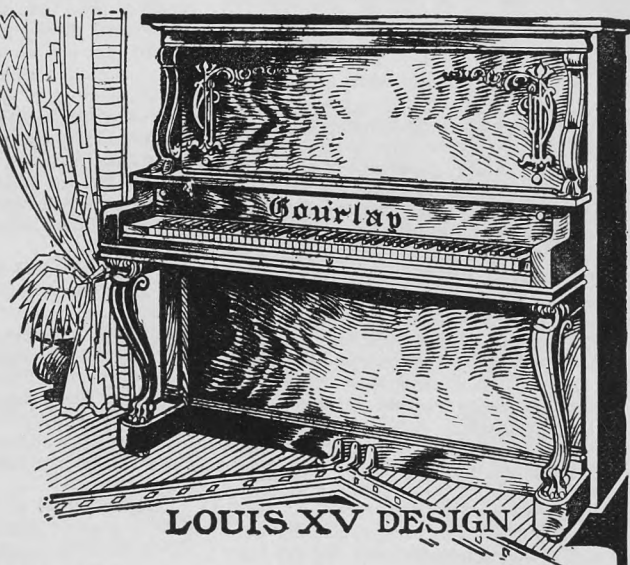
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shawl is clean, when, after being thoroughly shaken, it can be hung in the wind. Unless really stained this treatment will be found efficacious.

A good way to clean an oil painting which has become darkened or dingy from smoke, dust or other causes, is to rub it with an Irish potato cut in half. Sometimes the sparing use of a little oil seems further advisable. The gilt frame may be cleaned with a weak solution of vinegar and water.

Silk waists of taffeta and other non-washable makes can be repeatedly cleaned with gasoline, which is used much as one would water in washing anything else, care, of course, being taken to bear in mind its highly inflammable properties and keep it far removed from fire or lights. Kid gloves are cleaned much in the same way, some people preferring to put them on the hand to wash them; it is easier to give a little extra rubbing to the finger tips or other parts which may be the most soiled.

Oxalic acid removes ink stains from paper, and even from a printed book without injuring the print. Bread crumbs rubbed on will clean soiled paper.

Strained black coffee, hot, is fine for renovating either black silk or black alpaca. Sponge the pieces well, working across rather than up and down the width, and iron before quite dry—on the wrong side for alpaca, and on the right side for the silk. The coffee removes entirely that shiny, greasy look which good old black silk sometimes gets. Water in which Irish potatoes have been boiled is also recommended for this.

An old fashioned way of doing up black silk was to boil an old black kid glove in a pint of water, down to half a pint. Sponge the silk with it, and either iron it on the wrong side or pin the pieces perfectly flat on something and allow the sun to dry and iron them at the same time. The silk is said by this means to retain its luster and softness, regaining at the same time the "body" of new silk. Satin should be ironed on the right side. Beer is used by some people for sponging silks and satins, but coffee is preferable, since beer gives it a crackly, papery appearance.

Dyeing, is of course, the greatest renovator known, and it generally pays to dye fabrics of a really good quality—or rather to send them to a dyer's, for the extra expense is well worth while for a good garment. Men's black overcoats, coats and trousers dyed black by a professional dyer, are as good as new, for not only is a good black color restored but the process includes a thorough cleaning and pressing.

All wool goods dye better than any others, especially if of a close weave; allowance, of course, must be made for shrinkage, though it is so customary now to have woolen goods of any weight shrunk before they are made up at all that often dresses, as well as tailor made goods, do not shrink perceptibly in dyeing.

As a rule mixed fabrics, especially cotton and wool, do not dye well and are best not attempted. Silk and woolen mixtures do better, and alpaca, though a mixed fabric, dyes satisfactorily, shrinking only a little.

China silks do not as a rule dye very well. Really good silks dye nicely, but it is best not to use them too prominently after dyeing, as they are liable to show having been dyed, but do nicely for trimmings and linings.

Cotton dyes readily, but care must be taken to purchase a dye especially designed for cotton, a different treatment being required for a vegetable fabric to that employed on an animal product like wool.

As to the colors which may supersede the former ones, a care must be exercised in their selection or disappointment may result. Most people would imagine that white woolen goods would dye perfectly any shade desired. But as a matter of fact, owing to the sulphur used in bleaching it, an even surface of color seems hard to get and there are comparatively few shades that it "takes" well.

Plaid goods may be dyed a dark color—as dark as the darkest strand.

The Prune as a Relish and a Food

Any scientific work dealing with food will tell you that fruit and nuts contain large quantities of sugar and fats, that acid fruits are needed every day in the year, and that the nearest to a substitute for regular physical exercise is a plentiful

fruit diet. There is no better way in which to imbibe a goodly amount of absolutely pure water than to eat plenty of fruit. Any physician can tell you of the merits of the fruit in giving strength and tone to the digestive organs.

The prune as marketed is of nothing more nor less than a very nutritious, sugary and delicious plum. In its preparation for the table the aim should be to restore it as nearly as possible to its ripe condition on the tree.

The prune more nearly approaches the ideal human food than any other article of diet.

And there is no more delicious, appetizing dish than prunes properly prepared.

Wash the prunes carefully; no harm is done in rinsing them well. They may have sugared; that is the fruit sugar may have exuded through the skin and give them a white appearance. No harm is done.

Then soak the prunes. You have bought prunes without water, but to get them back to their fresh state their present dry weight must be nearly doubled by absorption of water. They lost that in curing. Ten or twelve hours of soaking in cold water will be enough, or less in tepid water. Under no circumstances soak them till the skins begin to break. When soaking begins add sugar as desired. The prunes are sweet; but sugar put to soak with them is changed during the association to fruit sugar. The prunes, while not materially sweeter to the taste, are richer in flavor. Do not add sugar to prunes after cooking; you injure the flavor.

Now your prunes are palatable just as they are after soaking. A great many are eaten so, and those who acquire this "prune habit" usually abide with it. But we will presume you want your prunes cooked a little.

Keep them in the water in which they were soaked and set them to simmer in a broad pan so that the prunes shall not be more than three inches deep. The water should hardly cover them, but should show among the surface prunes. Then let them simmer.

Do not boil prunes; that is what spoils prunes, according to most epicures.

Simmer, simmer, simmer, simmer.

Keep the lid on; shake gently now and then; don't interfere with a spoon. If the water is above 180 degrees Fahrenheit, it is too hot.

When the skins of the prunes are tender (take one up in spoon and see if the skin breaks easily between finger and thumb), the prunes are done. Pour off the liquor and boil it down to a syrup by itself if desired. Use as much as you wish of it with the prunes. Serve the prunes, about eight large ones to a dish, with a tablespoonful or more of cream, and you have one of the most delicious dishes in existence.

A little claret or sauterne poured over prunes just as cooking is finished adds a flavor liked by many.

One word about how to treat prunes. Don't suppose because the prune keeps better than any other cooked food that it will remain palatable if abused. Cook not too many at a time; if you have them on the table every day as you should, you should in slovenly style cook a month's supply at a time. You would not think of baking bread or cooking meat so.

Dr. Hanson, of Cooper Medical College, San Francisco, who has made a study of prunes, says:

"Nutritious value, a pound of prunes equals a gallon of milk; greater than a pound of bread and as cheap. Bread and prunes are as economical a diet as bread alone and far more healthful. Fresh meat, fish, milk or eggs, are not even approximately as valuable food as prunes and are much more expensive proportionately."

In a lunch for school or factory you may substitute stewed or steamed prunes for part of the bread, and, pound for pound, you will be at no greater expense.

There is no fruit more healthful. A dish of prunes a half hour before retiring and a dish at breakfast, and stomach ills will disappear. As a tonic and regulator of the digestive and assimilative apparatus of the human body, the modest prune without an M. D. to its name, has unequalled value. When you are inclined to take somebody's bitters or sarsaparilla, eat prunes; when some patent medicine warranted to clear your mind or your stomach or your blood, appeals to you—why, eat more prunes.

Lindsay's
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EDISON PHONOGRAPHS

Gem Phonograph

Edison Gem Phonograph, including 10-inch horn, model C, Reproducer, etc., in handsome oak carrying case, the most perfect talking machine for the price on the market.

Price, \$10.00.

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Edison Standard Phonograph, including 14-inch brass bell horn, model C, reproducer, in handsome oak carrying case, (you can make your own records on this machine by purchasing a recorder).

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Home Phonograph

Edison Home Phonograph, model C, reproducer, new Edison recorder, 14-inch horn. This machine plays 6 records with one winding. A fine phonograph for concert or home use, you can make your own records and play them on this machine.

Cash Price, \$30.00.

Terms, \$32.00, \$10.00 cash, \$5.00 per month.

Triumph Phonograph

Edison Triumph Phonograph, model C reproducer, new Edison recorder, 14-inch horn, sapphire shaving knife, plays 14 records with one winding, the easiest running machine on the market. You can make records, and play them, you can also shave records. A powerful machine for home or concert hall.

Cash Price, \$50.00.

Terms, \$52.50, \$15.00 cash, \$7.00 per month.

No home should be without an Edison Phonograph. With one you can have entertainment at all times and of all classes: band, orchestra, songs, stories, etc., etc. The Edison machine is the most perfect on the market. Write for catalogue.

If you have an Edison Phonograph write for our catalogue of records. We have the largest stock in the west, having every record in the catalogue. Write today.

NORMAN LINDSAY, LTD.

284 Portage Ave., Winnipeg

PHONOGRAPH DEPT.

Recipes

FRENCH ROLLS.—Prepare the yeast as you would for bread and work just the same; add one quarter of a pound of butter one quarter of a pound of sugar, four eggs, beaten light; work until it leaves your hands perfectly clean, then form into rolls; raise and then brush with beaten egg and bake.

SARATOGA POTATOES.—Peel and slice on a slaw-cutter into cold water, wash thoroughly and drain; spread between the folds of a clean cloth, and pat them dry. Fry a few at a time in boiling lard as you do fried cakes or crulls. Salt them as soon as they are taken out of the lard. They are often eaten cold. You can keep them hot by putting in a colander and an open oven.

ORANGE SHERBET.—Five quarts of water, four pounds of granulated sugar four beaten eggs, juice and grated rind of four oranges and juice of two lemons. Beat sugar and eggs together, then add water and grated rinds. Freeze like ice cream. The strained juice of oranges and lemons should not be added until the mixture begins to freeze.

CABBAGE SALAD.—When making cake or pudding and having the yolks of eggs left, beat and pour them into a cupful of vinegar, scalding but not boiling hot; add two level teaspoonfuls of salt, two tablespoonfuls of white sugar, a scant teaspoonful or less of pepper, and a heaping teaspoonful of ground mustard. Pour hot over two quarts of chopped or sliced cabbage and mix well. Keep cold until served.

JOHNNY CAKE.—One and one-half pints of corn meal, one-half pint of flour, one tablespoonful of sugar, one teaspoonful of salt, two heaping teaspoonfuls of good baking powder, one tablespoonful of lard, one and one-fourth pints of milk, two eggs. Stir together corn meal, flour, sugar, salt and powder; rub in lard cold, add eggs (beaten) and the milk; mix into a moderately stiff batter; pour from bowl into shallow cak pan. Bake in a rather hot oven thirty minutes.

GRAHAM ROLLS.—One pint of graham flour, one pint of flour, one teaspoonful of salt, two teaspoonfuls of baking powder one tablespoonful of lard, three fourths of a pint of milk. Sift together graham flour, flour, salt and powder; rub in lard cold; add milk, and mix the whole into a soft dough that can be handled—not too soft; flour board, turn it out and form into rolls shape and size of large fingers. Lay them on baking sheet so they will not touch. Wash their surfaces with a soft brush, dipped in milk, to glaze them.

Bake in a hot oven from ten to twelve minutes.

Why it Pays to Have "Tact."

The want of tact has often been the cause of much misunderstanding and discomfort, and those people who always say and do the wrong thing at the wrong moment should strive to reverse the order of affairs.

There is no knowing what a tactful girl can accomplish. She is usually successful

"The Canadian Farmer wants the best --- he raises the Best Cattle, grows the Best Wheat, has the Best Country under the Sun."

This quotation from the speech of a distinguished foreigner is not overdrawn. — We add that in



Crown Brand Corn Table Syrup

He has the healthiest, purest and most nourishing, and best product of the finest Corn.—Every new arrival from the Western States knows the value of good healthy Corn—he has used it at home for years.—In Canada he has "Crown" brand.—Ask for and insist upon getting "Crown" brand Corn Syrup.

EDWARDSBURG STARCH CO., Ltd., Montreal

in the home, in society and business, besides being a welcome comforter in times of trouble, and one who can enter heartily into another's happiness.

To be tactful one must be utterly free from self-consciousness, and try to think only of the requirements of others.

A ready listener is always welcome in all grades of society, and the tactful girl will patiently listen to the woes and ills of other people without letting them see how uninteresting they are to her, or, in return, repeating her own troubles.

For some reason or other, women are known to be proverbially talkative. Why they should be especially credited with this fault it is difficult to discover, for I am sure that many will agree that the opposite sex are keen rivals in this respect. Be that as it may, there are times when silence is golden, and a tactful person will know when it is best to maintain a discreet silence.

What good can it do any one to divulge a family secret or failing? A tactful girl will find no interest in this kind of conversation, and will introduce a more pleasing topic. She can always keep a quiet tongue in her head when necessary, and will hesitate to spread unkind gossip.

When in the company of the opposite sex, a girl will show her tactfulness by the interest which she takes in the likes and dislikes of her companion, always endeavoring to lead the conversation into the direction which she knows will be most enjoyable to him, and not by constantly wondering if she is making a good impression.

She will soon find the best way to entertain her friend by discussing his favorite sports, books, etc., instead of those in which she is most interested.

It is during business hours that a girl particularly needs to exercise her tact, and especially if she happens to be the head of those who are co-workers with her.

She is almost sure to be subjected to the jealousy and dislike that is so often felt for those occupying her position.

This, however, greatly depends on the way she treats those who are under her charge, and she will find that matters will be much pleasanter for all concerned if, instead of acting in a domineering way, she superintends matters in a more kindly but at the same time firm manner.

This does not mean that advantages will be taken, but, on the contrary, the girls under her authority will be more likely to be careful over their work, and will not feel like so many machines, but will take a real interest in it.

The person who seems to delight in repeating mean and unkind gossip is not likely to become a favorite with any one; but a welcome will always be found to those who know how to take an interest in others' concerns and to keep their own troubles to themselves thereby exercising their tact.

... FOURTEEN ...



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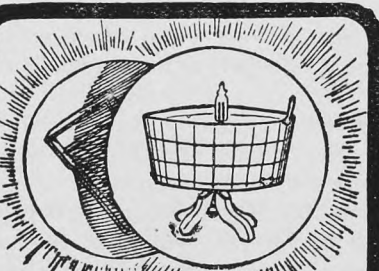
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It is never too late to mend; start right now to advertise in the Canadian Thresherman and Farmer.



"Things That S'prise You."

There's lots of things that s'prise you
When you're little just like I;
When you bump your head they tell you,
"Oh, you're too big to cry!"
But when there's pie for dinner,
And you want another bite,
The big folks say, "Oh, no, indeed,
You are too little, quite."

Then when there's company, you know,
They wash you up so clean,
And tell you little bits o' folks
Must not be heard, but seen.
But next thing that you know about
You hear 'em say, "Now, dear,
Stand up and say your little piece
For Mrs. Smith to hear."

That's just the way things s'prise you
When you're little just like I,
But I s'pose you'll understand 'em
When you're older, by and by.
—Exchange.

Father's Mistake.

Father distinctly said, the other day,
That in the night, when I'm asleep so
sound,
The earth keeps turning over all the time,
And every morning it's been half-way
round.

I thought how grand to see the big round
world
Go turning past this window in the hall,
And here I'm up at four 'clock to watch,
And there is nothing going by at all.

I thought that deserts, palm trees and
giraffes
Might just be passing by the time I
came;
And now, instead of all those lovely things,
Here's this old yellow rosebush just the
same.

—The Century Magazine.

Jack Frost's Vacation.

By COUSIN DORIS.

"I think I shall go on my yearly vacation journey," said Jack Frost to Queen Sunshine one morning as he sat eating his bowl of ice cream. Jack Frost lived on ice cream. "I have not been feeling well," he continued, "and I think I need a change."

Queen Sunshine looked at Jack Frost, anxiously.

She feared they could not live together congenially as the warm climate seemed to make Jack Frost ill. He had a dreadful cold and every time he coughed a chilling breeze touched the little flowers and made them shiver.

One night he sneezed so hard that he actually covered the grass and flowers all over with ice crystals.

Was it strange then that lines of care began to show on the fair face of Queen Sunshine? After considering conditions thoughtfully, she

decided that it would be well for Jack Frost to take his annual vacation.

But Queen Sunshine felt sad and a great cloud covered her face till it made the earth dark. She then cried—oh, so hard—and her tears fell on the flowers below until they hung their pretty little faces and cried too.

For a whole day the flowers and trees cried.

Then Queen Sunshine peeped through the cloud, and soon the darkness disappeared and all of the little flowers, with tears in their eyes, looked up at their queen. She dried their eyes with her smiles and the world became happy again.

Every flower seemed more beautiful than before the storm—just as men and women become more beautiful in character after passing through sorrow.

But in the meantime, a quick flash of lightning indicated the approach of Jack Frost's chariot. This was quickly followed by a rumbling sound of thunder which, of course, was Jack Frost's horses prancing through the air. He was leaving for his vacation.

Do you think he felt sad? He certainly did, because a big black

looking cloud darkened his face and large tears of ice dropped from his eyes, and fell to the earth; Such terrible tears!

Why they just cut the tiny faces of the flowers till they nearly died. As the tears fell thick and fast they made a fearful noise.

(It was the hardest hail storm that had fallen in years.)

Finally Queen Sunshine could endure it no longer so she told Jack Frost he must stop crying. Then he kissed Queen Sunshine "good bye" and in a short time the rumble of the chariot and horses died away in the distance. Queen Sunshine then turned her attention to the flowers and birds.

All vegetation took on new life which made the farmers very happy.

Dr. Weather mended the broken faces of the wounded flowers and the whole world of flowers and birds laughed and sang.

Meanwhile Jack Frost drove his horses straight to the planet of Jupiter where he intended to get a new supply of winter material at the wholesale house of Seasons.

They had prepared for him and had added a splendid amount of new material.

There were thousands and thous-

ands of new patterns for snow flakes—all in show cases, behind which were the dearest fairy clerks in the whole world. They were dressed in dazzling jewelled gowns, and as Jack Frost looked at pattern after pattern of new snow-flakes, the tiny fairy clerks smiled and waited on him courteously.

After he gave his order for the winter's supply of snow flakes he went to the decorating department, which was on the top floor. The floor walker greeted him cordially and asked kindly: "What can I do for you this year, Mr. Frost?"

"I want the very best supply of materials I can buy for decoration," he replied, "because next winter must be the most beautiful winter on record."

"We have found lately a mine on this planet filled with jewels more precious than have ever before been known. A tree or grass touched by one jewel will be changed into wonderful beauty. We have our decorating fairies trained well this year and I am sure if you order a large supply of these rare jewels and hire our decorating fairies, you will have a winter of rare beauty."

"Are there enough of these jewels for my use?" asked Jack Frost, stroking his whiskers.

"Oh, yes," replied the floor walker, "we have large orders in from other planets, but if you want the jewels, you may have them all."

"I must have my planet the most beautiful, so I will give you my order," said Jack Frost examining one of the jewels.

"The hard part of this decorating is the fairy sets the jewel in the top of the tree or piece of vegetation and if he sets it right, the whole tree or part of vegetation thus set is immediately covered with diamonds, pearls, rubies and sapphires. Of course the work must be skilfully done, but if you hire these decorating fairies you will have the most beautiful winter you have ever had."

So Jack Frost gave his order. Then Jack Frost bought a great amount of freezing material and food for the winter.

The last purchase was the Winter itself. There was a large assortment—long winters, short winters, cold winters, warm winters, stormy winters, pleasant winters—oh, so many kinds.

JUNE PUZZLE PICTURE.



Find the captain of the ship.

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"Now see here, sir," said Jack Frost to the clerk, "the winter I ordered last year did not please the people down there in that Western Canadian country. They complained constantly because it was too stormy, too cold and too long."

"There has been so much complaint that I must order a different winter for the next one," he continued, "I want a short winter with no snow and it must be warm," and Jack Frost sighed as he sat down at the winter counter.

The clerk looked perplexed. "Well let me ask you some questions Jack Frost," he said.

"Very well, replied Jack Frost, "I shall try to answer you as well as I can."

"You say you want no snow. Do you know what will become of the vegetation if you have no snow, Jack Frost?" asked the clerk.

"No, sir."

"Well if you have no snow it will have no protection and the roots will die and the next summer you will have a famine for vegetation. The snow is a protection for vegetation. Furthermore, Jack Frost, the Canadian people would have little moisture for the vegetation in the spring of the year if they had no snow. You must know that the melting of the snow adds much fertility to vegetation."

Jack Frost looked down thoughtfully.

"Could your people get along without water?" asked the clerk.

"No, sir."

"Well you must know that the melting of the snow fills up the rivers and lakes and provides more water for the people and the stock." "Then, too," he continued, "do your people like winter sports?"

"Yes, very, very much," replied Jack Frost.

"Then if there were no snow, your people would have no sleigh-riding, no snow-shoeing, no toboggan-sliding."

"I'll take a hundred million bushels of snow," said Jack Frost, excitedly. "We could never get along without snow, I see. Now let me see the temperatures, please. They seem to want warm winters down there. They complained so much

of the cold weather that I must order a warm one this time."

The clerk showed Jack Frost a list of temperatures.

"Did you have a healthy or a sickly winter this year, Mr. Frost?" asked the clerk.

"Let me see," answered Jack Frost, "Oh, I remember now; the health reports state that we have had less sickness than has been known for years. Yes we have had a healthy winter."

"If you want a warm winter you will have a sickly winter—warm winters mean weak people," said the clerk, looking at Jack Frost earnestly.

Jack Frost's business being finished, he left the wholesale house of seasons and went to the ice palace nearby where he usually stays during his vacations, while he waits for his orders to be filled.

Then after Queen Sunshine has ruled her share of time Jack Frost will return from his vacation and give us next year the most beautiful of winters.

Cousin Doris Letters.

PRIZE LETTER.

Dear Cousin Doris,—Since I saw that you would give a prize for the best descriptive letter, I thought I would write a description of my home and the surrounding country.



Courtesy Outing
The Weasel has more grit for his size than any other living animal.

"Oh, I cannot have my people sick," answered Jack Frost.

"If you order a warm winter your people can have no skating, no curling and no hockey playing," added the clerk, knowing how fondly the winter sports are cherished.

"I'll order a cold winter, then," replied Jack Frost, "I want a healthy, happy country."

We have very pretty scenery about us—we can see a great distance. Our house is on a little hill beside the Pilot Mound Hill.

We have nice hedges of evergreens, caragamas and artimesias around the house which makes it very beautiful in summer when all are green.

The Pilot Mound Hill is a high and a noted hill. It was a reliable guide to the travellers in the early days when landmarks were few and far between.

In summer we go up on the top of the Mound with a pair of field glasses and we

can then see many miles around. Some say we can see as far as forty miles away.

It is a very pretty hill in the spring as the anemone and tiger lilies come out very early on the hillsides and it has a nice cluster of trees on the top of it. In winter we go and sleigh ride down the hill. It is steep in places and makes splendid sleigh-riding. I often slide down all alone.

People for miles gather around to sleigh ride on the hill and skate on the ice which is at the bottom of the hill—on the south side.

The town of Pilot Mound was once situated on the east side of the hill but the C. P. R. did not build their road up to the hill so the town was shifted a mile and a half southeast to the railroad. Pilot Mound has been incorporated for several years. It has beautiful streets and gardens.

We can see bush along the Pembina river, which is about seven miles away. It is most beautiful to walk or drive through. Many travelers drive out from town to see the magnificent view that can be seen from the top of the hill. They say it is one of the finest sights they have seen in their travels and some have traveled from coast to coast. Yours truly,

ESTELLE JACKSON.

Fairplay Farm, Pilot Mound, Man.

HONORABLE MENTION.

Dear Cousin Doris,—This is the first time that I have written to you.

I live in the village of Lansdowne which is situated about two and one half miles north of the river St. Lawrence and about ten miles east of the town of Gananoque.

Lansdowne is not an incorporated village but has a population of six hundred. It consists of two hardware stores, two tinshops, five dry goods stores, two bakeries, five groceries, a Methodist, Presbyterian and English church, a post office, a depot, two butcher shops, four blacksmiths, two implement ware houses, a drug store, a bank, two furnishing stores and also a school consisting of two different rooms called Brae Head.

I have one sister named Lulu. She and I go to school quite regularly. We have missed no days from Xmas to Easter. My sister is in the third book and I am in the Junior fourth.

My papa runs a saw-mill in the winter and threshes in the fall.

Well I guess I shall have to close. Your affectionate cousin,

VERMA WARREN.

Lansdowne, Ont.

(Will you describe the St. Lawrence river, Verma?—C. D.)

Below is a list of the names of cousins who have sent in very nicely written letters but we have not had enough space to print them. Cousin Doris is very sorry they cannot be printed:

Trilby Dakin, Neepawa, Man.; Elizabeth Christena Stewart, Deloraine, Man.; Mary Mc Dougall, St. Louis P. O., Sask.; Bessie Turner, Dauphin, Man.; Dora Macartney, Weirhill, Sask.; Violet Mason, Indian Head, Sask.; Bertie Harold, Caron, Sask.; Berson A. Chadsey, Oak River, Man.; Thomas Stanger, St. Raymond, Man.; Lenora Wacker.

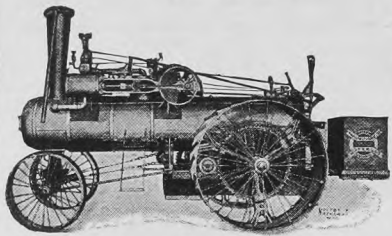
My Bonnie lies under the auto

My Bonnie swears under the car.

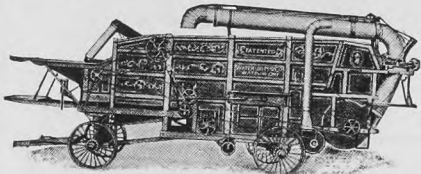
Please send to the garage for some one

For 'tis lonesome up here where I are.

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The BOOK the Boys swear by
One writes me that he has every
book ever written on Engineering,
and he would not give Rough and
Tumble for the entire bunch. One
dollar gets it. Send to
J. H. MAGGARD. Iowa City, Ia.



Fresh from the Press.

The 1907 catalogue of the Parsons Hawkeye Mfg. Co., Newton, Ia., is at hand. It fully describes in detail the famous Hawkeye Feeders, and tells why the Hawkeye takes the lead. Address them at their Winnipeg branch for a copy.

Catalogue No. 40, of the Bradley Manufacturing Co., of Bradley, Ill., has just reached us. Its 136 pages are brim full of interest for the users of tillage tools, describing in detail the famous Bradley line. Every dealer should have a copy on his desk, likewise the farmer; address them at Bradley, Ill., for a copy.

The new Threshers' Supply catalogue of the Crane & Ordway Co. is at hand. A full line of thresher Supplies is illustrated. Every thresherman should have a copy. Address them at their Winnipeg office.

The new catalogue of the Royal Manufacturing Co., Winnipeg, Man., has just been issued from the press. It describes in detail the Monarch self-feeder, the Fosston wind stacker, the Caswell belt guide, oil pumps, thresher tanks, hay stackers, Closz sieves and chaffers, grain and smut cleaners, etc., etc. Address them at Winnipeg for a copy.

One of the neatest things that has come to our desk in the way of a catalogue for the season of 1907 is the new Melotte blotter and calendar. It describes in detail the Melotte cream separator, and at the same time the inside is so arranged that the farmer can use it as a blotting pad. Address the Melotte Cream Separator Co. at 312 Ross Ave., Winnipeg, Man., mentioning the Canadian Thresherman and Farmer, and they will be pleased to send you a copy.

Bulletin No. 4107 issued by the Chas. A. Stickney Co., St. Charles, Minn., has just been handed to us by the Ontario Wind Engine & Pump Co., Winnipeg, who handle the famous Stickney line of gasoline engines. It is a neatly gotten up affair, and gives fifty-seven points of superiority of the Stickney gasoline engine. It would seem to us that fifty-seven points should be enough to recommend any engine, but in order to satisfy yourself, we would suggest that you write the Ontario Wind Engine & Pump Co., Winnipeg, Man., for a copy, mentioning the Canadian Thresherman and Farmer.

A neat little booklet describing the Third Annual Winnipeg Horse Show has just been issued from the press. It is dainty, natty, neat, and striking, just like a horse show should be, and if the booklet is any indication of what the real thing is going to be, lovers of fine horses may look for a treat. Address the Winnipeg Horse Show Association Limited, Winnipeg, Man., for a copy.

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S. M. Daly, Manager	J. C. Kennedy, Manager
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H. M. Stewart, Manager	J. D. Bell, Manager
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MELFORT, Sask.	YELLOWGRASS, Sask.
E. R. Jarvis, Manager	C. Hensley, Manager

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Business may be transacted by mail with any of the branches of this Bank in Canada and the United States, accounts being opened, deposits made or funds withdrawn in this way with equal facility. Every possible attention is paid to out-of-town accounts and general farmers' business. Notes discounted, sales notes collected, etc.

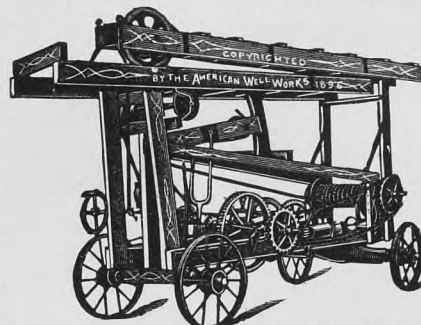
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Why not add \$2,000.00 net per year to your present income by purchasing an American Well Sinking and Prospecting Machine

Drive it with your Threshing Engine.

Prospect for :: ::
COAL OIL, GAS
or WATER.

Removes cores
when required for
yourself or friends.
You can do it with
a little hustle and
push.



We also build
heavy and light
ARTESIAN WELL
PUMPING
MACHINERY,
COMPRESSED AIR
WATER LIFTS,
COMPRESSORS,
Etc.

Write us for Catalog and tell us all about this.

THE AMERICAN WELL WORKS, AURORA, ILL., U.S.A.

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T. H. MAXWELL, 178 RUPERT STREET, WINNIPEG, MANITOBA.

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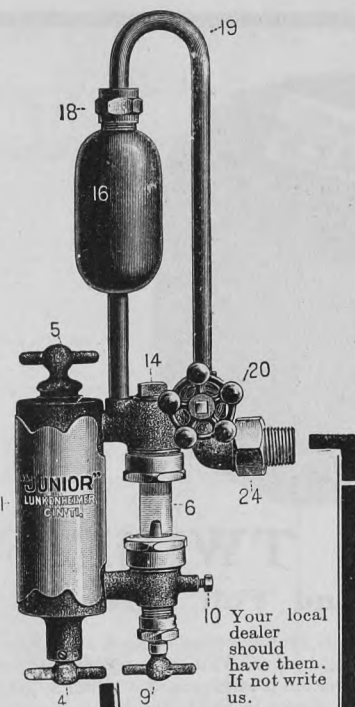
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Superintendent.



Lunkenheimer

"JUNIOR" LUBRICATOR

The only single connection sight feed Lubricator giving satisfactory results.

For small engines, portables and steam pumps. Can be attached to steam pipe or chest.

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Largest Manufacturers of High Grade Engineering Specialties in the World

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Your local dealer should have them. If not write us.

THE new 1907 catalogue of The Robert Bell Engine & Thresher Co., Seaforth and Winnipeg, has just reached our desk. It is a commendable piece of work in every way and is a credit both to compiler and printer. The Bell line of threshers, engines, saw-mills, supplies, etc., is fully illustrated. Threshermen in Canada West should address them at their Winnipeg office for a copy mentioning the Canadian Thresherman and Farmer.

THE DeLaval Monthly, edited and published by the DeLaval Separator Co., is a neat little house organ gotten out in the interests of their goods. It is brimful of good things for all dairymen. Send to their Winnipeg house for a copy.

THE advertising department of the International Harvester Co. has been turning out some very noteworthy stuff of late. A most complete and exhaustive catalogue of Weber wagons is fresh from the press, and to say the least it is the best thing that we have seen so far. The several lines of Weber wagons are fully illustrated in half tone and color with complete description and specification attached.

Four other little booklets have also just been issued by the above concern, viz.: "Development of the Cream Separator," "A Wasteful Farm Practice," Development of Agricultural machines" and, "Three Hundred Years of Saw Development."

These booklets deal respectively with cream separators, manure spreaders, process of machine development, and the gasoline engine. They should prove of interest to every farmer in Canada. Address their nearest branch for copies.

THE Carberry Stacker Co., of Carberry, Man., have just issued a very neat little circular describing their famous 2 in 1 wind stacker. The stacker is well worth investigation and the circular describes it so fully that any one interested should address them for a copy.

THE annual catalog of Geo. White & Son, of London, Ontario, is just fresh from the press. Their full and complete line of engines and threshers is fully described. Address them mentioning the Canadian Thresherman and Farmer for a copy.

A suggestion as to soliciting threshing. Go about it in a business-like way. When you meet the man that has a job you want, ask him for it in a plain, practical manner and save his grain, and do it in as short a time as is consistent with good work. The subject of price usually comes up at this time. Let your rule be one price to everybody and the account cash as soon as the work is done unless there is some reason for extension.



Your best Horse may strain his Shoulder or Fetlock tomorrow

Get a bottle of FELLOWS' LEEMING'S ESSENCE today.

Fellows' Leeming's Essence acts like magic. It draws out all the soreness and stiffness from strains, sprains and bruises—and limbers up the joints. One application usually cures ordinary lameness—and two rubbings fix the horse all right.

It does horses so much good right at the start that they can be put to work a few hours after the Essence has been applied.

Accidents are liable to happen at any time. Be ready for them.

Get a bottle of Fellows' Leeming's Essence today. 50c. a bottle.

At all dealers or from the

NATIONAL DRUG & CHEMICAL CO., LIMITED, MONTREAL.

11

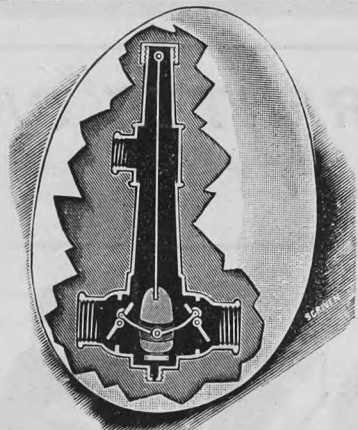
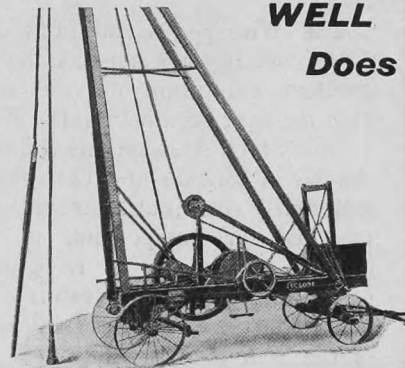
WELL DRILLING OUTFITS

Does Well Drilling Pay?

This is the title of one of our booklets sent on request. It presents the subject just the way you want it, to get at the actual facts of the business; gives you a correct basis on which to figure. Also send for our catalogue our complete line of drills showing various sizes and styles.

THE CYCLONE DRILL CO.

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"JUST OUT."

STEAM PURIFYING VALVE

For Marine, Traction, and other Engine Boilers. Patented in Canada, United States, England and Australia. Made to secure the steam from the highest end of a boiler, and prevent priming. Works automatically by the action of the Boiler. It saves fuel, water, and increases the power of the engine. Write for prices and testimonials to

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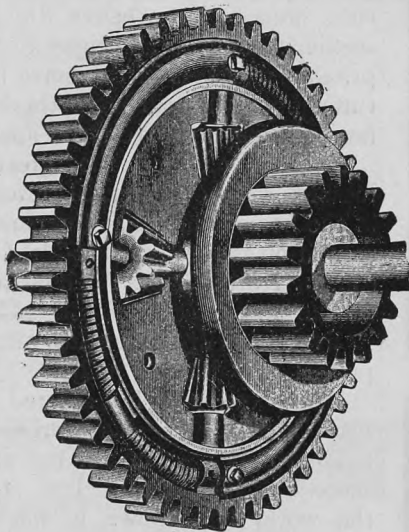
Purchaser is given a receipt and if Order or Cheque is lost or destroyed the amount will be promptly refunded. No red tape.

For full information and rates call on local agents of DOMINION EXPRESS or C.P.R.

If it's a Part of an Engine

THE HEATH SCHOOL OF TRACTION ENGINEERING
"BY CORRESPONDENCE"

Can Tell You All About It



THIS SCHOOL was organized for the sole purpose of educating and instructing men in the care and use of steam engines. One hour of your spare time each evening, that might be otherwise wasted, turned to account in this manner, will make of you a practical engineer in from two to four months. Time required to complete the course, depending a great deal on how much you study, and what knowledge you already have of steam engines.

The Canadian Thresherman and Farmer under whose control and personal supervision the course is given, guarantees its reliability and power to develop practical engineers.

THE QUESTION IS UP TO YOU

E. H. Heath Co.

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Is it not worth a one cent postal to learn more about this school? Of course it is, then ask for our booklet of information, by writing.

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Waltham Movementin a twenty year gold filled
case with gold filled chain

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WINNIPEG**Florence
Wood
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Pump and you
will have the
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ly to stand the
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Agents for Ideal Gasoline Engines

Winnipeg Exhibition.

The Winnipeg Industrial Exhibition to be held July 13-20 promises to be the most interesting as well as most instructive of any in the history of the West.

Never have more extensive preparations been made and never were conditions more favorable for an assembling of an enormous number of people in a week of continued pleasure and information. The management having proceeded successfully last year in the arrangements and renovations of the grounds and buildings of the Winnipeg Exhibition has now only the responsibility of continuing and completing conditions which will this year make the surroundings of the Exhibition not only of a degree of seemly orderliness and convenience that exhibitors will first appreciate, but of a nature conducive to the comfort of the people and the success of a great exhibition.

The Winnipeg Exhibition, July 13-20 will beyond question be the greatest exhibition of live stock that has ever been held in the West.

Live Stock Associations throughout Great Britain and Canada are generously contributing medals and trophies for competition at the coming exhibition in recognition of the importance of Western Canada and the wide-spread influence of the Winnipeg Exhibition.

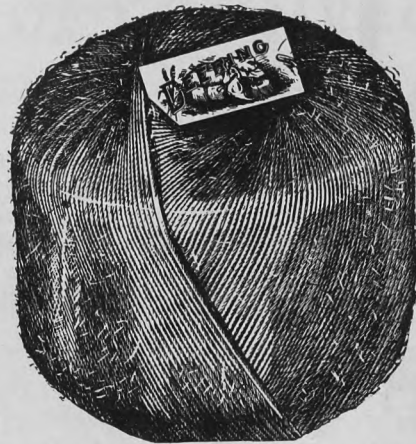
Assurances have already been received that never before will there be such an exhibit of high-class horses in the heavy draught sections, and the additions to the prizes and classes in the horse lists throughout will call forth the best horses throughout Western Canada.

Possibly one of the greatest reasons of the increased interest in the horse exhibits at the coming exhibition is the fact that Mr. Gibson, of Nottingham, England, one of the most distinguished judges of live stock in the world, will be present as a leading judge.

Mr. Gibson, who has assured the management of his presence, has not only been one of the most successful breeders of live stock the world has known in modern times, bringing the great prizes of Great Britain to the herds over which he has had direct control, but he has been a judge of the great stock shows of Argentina, at which the greatest assembly of live stock of the highest class are known to be.

As a judge of heavy horses and high grade cattle, Mr. Gibson's presence at the Winnipeg Exhibition is in itself an incentive to the stock breeders and owners of Western Canada to compete for a decision under his auspices is one that is not only authoritative but of inestimable value in a country where such decisions are peculiarly decisive.

The exhibition of cattle is expected this year to surpass in num-

**DEERING TWINE****Has Full Length and Full Strength**

Length is a most important feature in binder twine. Sisal and Standard should run 500 feet to the pound. Deering binder twine runs nearly 504 feet to the pound. A few feet extra on a pound makes a large amount when a quantity of twine is used. It means a considerable saving in the twine bill.

Binder twine to be thoroughly reliable must swing a weight of 50 pounds without breaking. If it breaks at any weight under this, it is liable to break in the field. In test trials Deering binder twine swung 59 9-10 pounds. This insures full and ample strength to keep the bundles intact during the entire process of handling the grain.

Deering twine will not kink and clog the knotter, or pull thin and break. It is exceptionally uniform in size and strength. If you have never used Deering twine, the best twine investment you can make will be to place your order for the Deering brand. You will have no trouble or delays, and your grain will be well bound.

Deering twine is made in four brands: Sisal, Standard, Manila and Pure Manila.

The nearest local agent will be pleased to talk with you about the excellent qualities of the Deering twine, and will demonstrate wherein it will be money in your pocket to use the Deering brand.

Western Canadian Branch Houses:

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**IT IS A GUARANTEE OF
QUALITY****TO HAVE****EDDY'S****Name on your purchases of**

**Washboards
Wood Pails and Tubs
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FOR SALE BY ALL FIRST CLASS DEALERS**The E. B. EDDY Company,**
LIMITED**HULL - QUEBEC****TEES & PERSSE, Ltd., Agents, WINNIPEG**

The Pump That Pumps
MYERS
Glass Valve
Double-acting, Lift, Tank and Spray
PUMPS
Store Ladders, Etc.
HAY TOOLS
of all kinds. Write for Circulars and Prices.
Myers Stayon Flexible Door Hangers
with steel roller bearings, easy to push and to pull, cannot be thrown off the track—hence its name—“Stayon.” Write for descriptive circular and prices. Exclusive agency given to right party who will buy in quantity.
F. E. MYERS & BRO.
Ashland, Ohio.

The J. H. ASHDOWN HDW. CO. Ltd.

Distributing Agents - WINNIPEG, Canada.

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TEMPLE BLDG., TORONTO**FREE ADVICE AS TO PATENTABILITY OF INVENTIONS**

You Can't Cut Out

A BOG SPAVIN or THOROUGHPIN, but

ABSORBINE

will clean them off, and you work the horse same time. Does not blister or remove the hair. Will tell you more if you write. \$2.00 per bottle, delivered. Book 4-C free.

ABSORBINE, JR., for mankind, \$1.00 bottle. Cures Varicose Veins, Varicocele, Hydrocele, Ruptured Muscles or Ligaments, Enlarged Glands, Allays Pain. Genuine info. only by

W. F. YOUNG, P. D. F., 112 Monmouth St., Springfield, Mass.

LYMAN SONS & CO., Montreal, Canadian Agents.

Also furnished by Martin Bole & Wynne Co., and Pulford Leonard Drug Co., Winnipeg, The National Drug & Chem. Co., Winnipeg and Calgary, and Henderson Bros. Co. Ltd., Vancouver.

The Bear Objects!



It takes two to make a bear hunt—and one is the bear. The hunter wants to feel that his ammunition is just right.

Dominion Cartridges

are made for all the popular Rifles, Winchester, Marlin, Savage, etc., in various Calibres and can be absolutely depended upon at all times. No miss fires or hang fires—and absolute evenness.

The lower price is simply the absence of duty. Dominion Cartridges are made in Canada.

This trademark guarantees quality. 2-07 Dominion Cartridge Co. Ltd., Montreal.



bers and quality of the stock, any that have hitherto been held and will indicate the marked progress made by Western Canada in this branch of the live stock industry.

The improvements and renovation of the buildings and grounds, carried out so extensively last year have been continued and will this year be completed making much to the comfort, convenience and pleasure of exhibitors and visitors alike.

The railway platform for the unloading and shipping of live stock at the exhibition grounds has been extended to twice its former dimensions insuring safety and expedition in the transfer of valuable animals.

The comfort and convenience of the general public in coming and going to and from the exhibition have been materially added to. The passenger platforms of the street railway and the turnstiles have been quadrupled in capacity, thereby obviating the possibility of great crushes of people and facilitating the ingress and egress of the large crowds of visitors.

This year arrangements made with the railway companies warrant the expectation both of a record attendance and of an exhibition previously unsurpassed in any one of its branches.

The importance of the grain exhibits is recognized by the setting apart of a whole building for the grain exhibit. The greatest prize for grain ever offered will be given in the Red Fyfe class, \$200 being offered for the first prize and proportionate prizes for the other successful competitors.

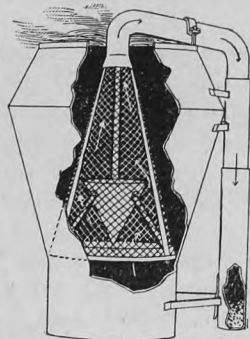
The school exhibits will be greater than ever, great as they were last year, and the exhibit of womens' work will be also of increased interest.

The Woman's Art Association of Canada will have in charge a unique and striking display of work from all parts of Canada, the handiwork of women of all classes and race from Indian work to skilled embroidery and lace from all parts of Western Canada.

Spectacularly the Winnipeg Exhibition will surpass all previous exhibitions. The great spectacular drama, The Siege of Edinburgh Castle will be given in all its marvellous interest and scenic display. The fireworks, under the direction of the great Hand Company, whose headquarters are Hamilton, Ont., will be of surpassing brilliancy and novelty. The tournament will be a revival of the most thrilling feature of mediaeval times and the tilting and combats will be of absorbing interest by the trained horsemen and horses participating.

Special efforts have been made to make the attractions before the Grand Stand the best that ever have been given in Western Canada. Understanding the interest taken in this feature contracts have

The Gullick Spark Arrester

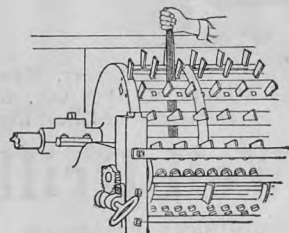
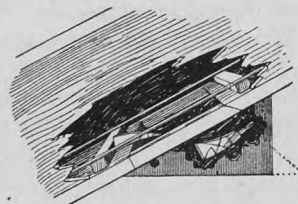


A Spark Arrester that overcomes that serious objection of always clogging; therefore it takes care of itself. One that is a perfect safeguard against fires will positively increase the draft of the engine, is durable and is fully guaranteed. Notice the working principles, the sparks must follow their natural course up the center of the screen, to the Spark Catcher.

Threshermen, why burn coal when you can get a spark arrester that guarantees you absolute safety against sparks escaping from the smokestack of your engine? Investigate this now.

The Handy Tooth Straightener

A tool with which you can straighten your concave teeth without removing the concave from the machine. With it you can straighten or take the twist out of any cylinder tooth with ease, and it is successfully used in removing the concave.



The Safety Tooth Catcher

The wonder of them all. This device attaches to the lower side of elevator and will positively catch any loose tooth or piece of iron that might work loose inside of the separator, that would otherwise return to the cylinder and cause untold troubles. Made to fit any make of separator. Sold on a positive guarantee.

Following is one of the many letters received from users of this tooth catcher: Mr. E. M. Pope, Watertown, S.D. Ivanhoe, Minn., Jan. 15, 1907.

Dear Sir:—In reply to your inquiry in regard to the Tooth Catcher attachment which is attached to elevator, will say I never had one tooth go back to the cylinder since I put the catcher on. I recommend the idea very much, all that is necessary to do is to pull out the slide one every half a day and let the dirt drop out. It don't seem to pack hard enough to bother the elevator.

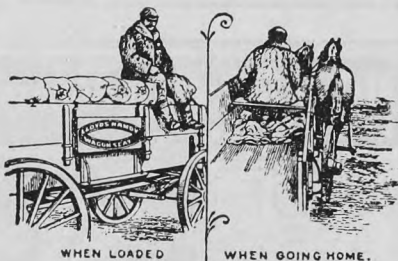
Yours truly, Ed. M. Swenson.

In ordering a new threshing outfit insist upon its being equipped with the above devices.

Write for descriptive matter and prices. Agents wanted. Address

E. M. POPE, Mfr. = Watertown, S.D.

LLOYD'S Handy Low Down Suspension Wagon Spring Seat.



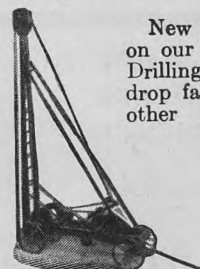
Patented in Canada, November 29th, 1904, in the United States, October 31st, 1905

FARMERS

"This is just what you want; it is lighter, handier, easier riding, more durable and safer than any other seat on the market. If your Implement dealer or Hardware merchant does not handle them send us \$3.50 and we will send you one, express pre-paid to any express office in Manitoba, Saskatchewan or Alberta."

WAWANESA WAGON SEAT CO.
WAWANESA, MAN.

WELL DRILLS



New patent just issued on our "Eccentric Drop" Drilling Machine. Tools drop faster than with any other Drilling Machine built. New tools and repairs on tools, our specialties.

Write us to-day.

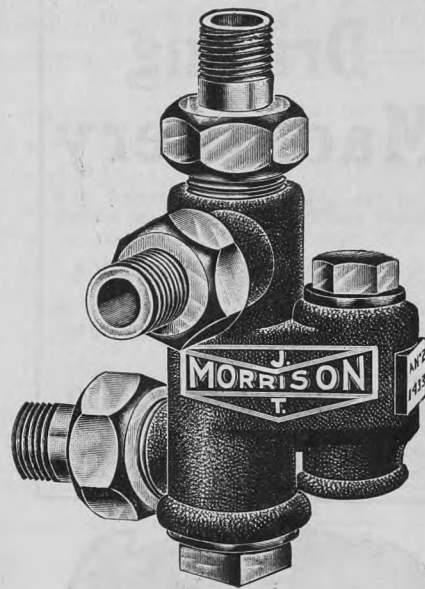
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When you Buy an INJECTOR

You Want a Machine That is

Simple in construction
Reliable in its action
Efficient in results

All the Good Features of a High Grade Boiler Feeder are found in the



J. M. T. OF YOUR DEALER OR DIRECT INJECTOR

Every Machine Tested

Fully Guaranteed

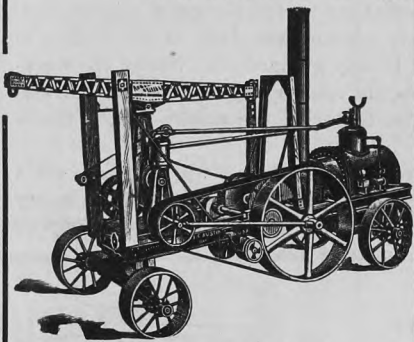
THE JAMES MORRISON BRASS MFG. CO., LIMITED

93-97 Adelaide St. West = = = TORONTO

"High Grade Steam Specialties"

COAL PROSPECTORS

We have just what you want for cheaply taking out cores. Write for particulars.



Austin Well Machinery, Manufactured by AUSTIN MANFG. CO., CHICAGO. The largest and Best Line of

Well Drilling

MACHINERY in America. We have been making it for 20 years. Do not buy until you see our new Illustrated Catalogue No. B. Send for it. It is FREE.

WELL MACHINE AND WIND-MILL COMPANY, LIMITED

P.O. Box 309. WINNIPEG, MAN. Representatives for Western Canada.



BUCHANAN'S UNLOADING OUTFIT

Works well both on stacks and in barns, unloads all kinds of hay and grain either loose or in sheaves. Send for catalogue to

M. T. BUCHANAN & CO., Ingersoll, Ont.

CIRCULAR NO. 7 ON JETTING and SLUSH

Drilling Machinery

Just out. If you are interested in a money making proposition get a copy NOW.

SEND FOR IT TO-DAY!

We have a reason to get them out as soon as possible. It is also to your advantage.

Cherokee Mfg. Co.

Works: 108 West Cedar St., Cherokee, Iowa, U.S.A. Branch House: Devil's Lake, N. Dak., U.S.A.



VIRGINIA FARMS \$10 and Up Per Acre

In "THE GREEN FIELDS OF VIRGINIA" you can grow better crops and raise finer stock at less expense than elsewhere. Close to large eastern markets. Excellent church, school, and social advantages. Abundance of water and grass; short, mild winters; cheap land and labor; and excellent shipping facilities make this section very attractive to homeseekers and investors. You can buy a

COMPLETE FARM FOR \$500 with comfortable, new, three-room cottage, and 25 acres for vegetables, fruit and poultry.

Write for our beautiful pamphlet, lists of farms, and excursion rates.

F. H. LaBAUME, Agt. & Indl. Agt. Norfolk & Western Ry. Box 6c Roanoke, Va.



already been made with some of the highest class artists, actors, gymnasts and owners of trained wild animals to insure a programme of exceptional interest and thrilling novelties.

In the sport-loving West there has been a recognition of the desire of many for high-class racing under proper auspices, and the management has prepared a race programme and received sufficient assurance of the presence of the great race horses of Canada and the United States, which will make the Exhibition week, July 13-20 a red letter day in the racing calendar of Western Canada. Over \$12,000 are offered in prizes and a programme of such generous terms provided that the greatest racing of the country's history is assured. For five days races of special interest for prizes varying from \$800 to \$300 will take place.

Every department of the Winnipeg Exhibition will be of greater dimensions than in the past, the attractions will be better and more diversified and the accommodations more convenient and attended to with a regard to the experience of the past.

The Winnipeg Exhibition, July 13-20 gives every promise of being the best attended and the most successful in its history.

Agricultural Summer Shows in Manitoba.

Glenboro, July 1st.
Springfield, July 3rd and 4th.
Wawanesa, July 3rd and 4th.
Carman, July 4th and 5th.
Miami, July 6th.
Emerson, July 8th and 9th.
Birtle, July 8th and 9th.
Elkhorn, July 9th.
Minnedosa, July 9th, 10th and 11th.
St. Pierre, July 10th.
Cypress River, July 11th.
Virden, July 11th and 12th.
Souris, July 29th and 30th.
Hartney, July 30th and 31st.
Swan Lake, Aug. 1st.
Gladstone, Aug. 6th.
Strathclair, Aug. 6th.
Melita, Aug. 6th.
Oak River, Aug. 7th.
Deloraine, Aug. 7th.
Shoal Lake, Aug. 8th.
Swan River, Aug. 8th.
Manitou, Aug. 8th and 9th.
Hamiota, Aug. 9th.
Holland, Aug. 9th.

FALL SHOWS.

Woodlands, Sept. 27th.
Kildonan, Sept. 25th and 26th.
Gilbert Plains, Oct. 1st.
Plumas, Oct. 2nd.
Meadow Lea, Oct. 3rd.
MacGregor, Oct. 4th.
Beausejour, Oct. 4th and 5th.
Selkirk, Oct. 9th and 10th.

Brandon, July 22nd to 26th.

The dates of this popular fair have been arranged for as above. The Fair will be held for five days this

GO INTO THE MERITS OF THE STACKER YOU BUY

In the past several seasons there have been a number of wind-stackers put on the market. Some were good while a number of them were worse than useless.

THE Neepawa Gearless Wind-Stacker and Chaff Blower

has come out of the field each year foremost amongst its competitors.



Stackers can be had with or without chaff blower as desired.

We make them to fit any make or size of machine.

What You Should Know Before Ordering a Windstacker

1. Has it any back draft?
2. Does it allow the dust to accumulate in the Separator?
3. Will the chute work at any point in a full circle?
4. Is the straw cut up by the fan.
5. Can you open the door to examine the shoe without being smothered by the chaff and dust?
6. Does the stacker run light?
7. Will it fit any make of Separator?
8. Has it a bevel gear, chaff auger or rakes?
9. Has it a belt tightener?
10. What is the weight?
11. What is the material used in its manufacture?
12. How much power does it take to run it?

Our Answers for the Neepawa

1. No.
2. No.
3. Yes.
4. No.
5. Yes.
6. Yes, the lightest on the market.
7. Yes, any make or size.
8. No, we drive with a straight belt from the cylinder shaft to the fan shaft without any gear.
9. Yes.
10. 650 pounds.
11. Galvanized sheet steel, seasoned oak and maple.
12. Less than any other stacker built in Canada doing the same work.

BETTER ORDER EARLY AND INSURE YOURSELF AGAINST DELAYS.

NEEPAWA MANUFACTURING COMPANY, Limited, NEEPAWA, MAN.

ESTABLISHED 1834

THE ARMSTRONG MFG. CO. LIMITED

MAKERS OF HIGH CLASS CARRIAGES.

INCORPORATED 1876

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COCKSHUTT PLOW CO.,

WESTERN REPRESENTATIVES. Catalogue on Application.

The Alberta Canadian Insurance Co.

AUTHORIZED CAPITAL \$500,000.00
Full Government Deposit

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HEDLEY C. TAYLOR, President JOSEPH H. GARIEPY, Vice-President
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All Classes of Fire Insurance Risks Written

Agents wanted in districts where we are not represented

MIRACLE CEMENT BLOCK MACHINE

WONDER FACE DOWN MACHINE

HELM HAND POWER CEMENT BRICK MACHINE:

Capacity, 10,000 PERFECT BRICKS per day.

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Is compact and durable. Drills fast.
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Trial will demonstrate its superiority.
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There is no better smoking pipe than one
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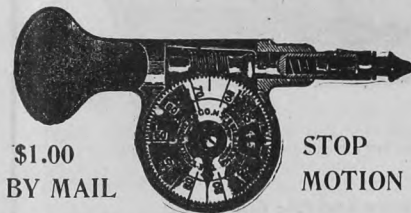
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We are selling these fine pipes for 50c.
Fully guaranteed.

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The two dials on this indicator permit
a continuous count of 5000 revolutions.
Discount to the trade.

THE GRANT MFG. & MACHINE CO
Bridgeport, Ct.

year commencing on Monday and
closing on Friday night. This ex-
tension has been found necessary
owing to the number of excursions
that are being run from all parts of
the Country.

Monday, July 22nd is the 25th
Anniversary of the Incorporation
of the city of Brandon. There will
be a Grand Reunion of old times.

The prize list will be ready for
distribution next week. Those not
receiving them in good time should
drop a post card to the manager.

The handsome lithographed hang-
er is now being distributed.

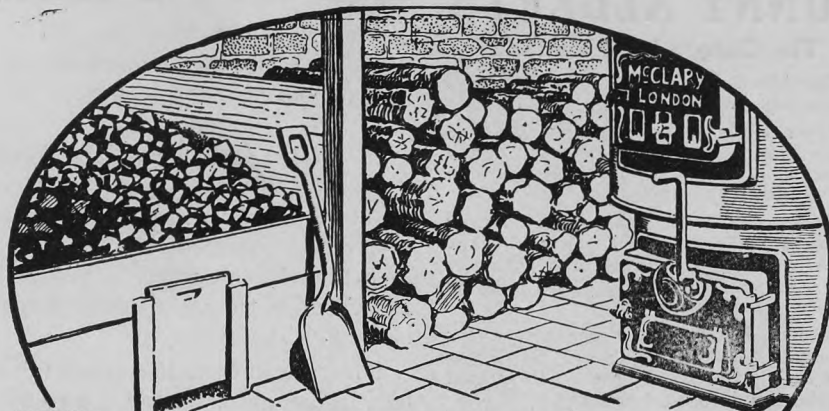
Recent Canadian Patents.

The following list of recently granted
Canadian Patents has been submitted to
us by Featherstonhaugh & Co., Patent
Barristers, Winnipeg, Manitoba:

- No. 104,399, to W. Loudon, Fairfield, Ia.,
for Improvements in Hay Carriers.
No. 104,413, to H. A. Wilberg, Nome, N.
D., for Improvements in Soil Pulver-
izing Attachments for Plows.
No. 104,417, to J. L. Bowers, Santa Clara,
Cal., for Improvements in Processes
for Preserving Fruit.
No. 104,429, to F. W. Morris, Victoria,
B. C., for Improvements in Processes
for the Manufacturing of Cyanide of
Potassium or Sodium.
No. 104,434, to E. B. Symons, Milwaukee,
Wis., for Improvements in Crushing
Machines.
No. 104,473, to W. Talbot, Toronto, Ont.,
for Improvements in Woven Fabrics.
No. 104,494, to D. Landau, San Francisco,
Cal., for Improvements in Pipe
Couplings.
No. 104,498, to W. C. Walker, Battle
Creek, Mich., for Improvements in
Hose Clamps.
No. 104,505, to J. R. Clark, Vancouver, B.
C., for Improvements in Siding Boards.
No. 104,660, to F. H. Wippler, St. Louis,
Mo., for Improvements in Sewer Pipe
Trucks.
No. 104,577, to F. A. Borst, South Bend,
Ind., for Improvements in Brick
Machines.
No. 104,599, to D. G. McKenzie, Vancouv-
er, B. C., for Improvements in Change
Giving Fare Boxes.
No. 104,588, to R. L. Grain, Ottawa, Ont.,
for Improvements in Binders.
No. 104,840, to W. R. Mulock, Winnipeg,
Manitoba, for Improvements in Waist
Belts.
No. 104,825, to J. Wilhelm, Moose Jaw,
Sask., for Improvements in Grain
Picklers.
No. 104,811, to K. M. Everhard, Bryant,
S. D. for Improvements in Wheel
Lubricators.
No. 104,754, to G. Cassady, New West-
minster, B. C. for Improvements in
Weighing Machines.
No. 104,713, to W. Baker, Aberdeen, S. D.
for Improvements in Belt Stretchers.

The following up-to-date lists of Can-
adian Patents is reported to us by Egerton
R. Case, Solicitor of Patents and Expert in
Patent Causes, Temple Building, Toronto,
Ontario.

- R. Belanger, St. Polycarpe Junction, Que.,
Ploughs for forming Surface Drains.
J. B. Montgomery, Petrolea, Ont., Ma-
chines for raising pumps and pump
rods from wells.
G. E. Figg, Montreal, Que., Tie Shields.
J. F. D. Withrow, Ottawa, Ont., Methods
of and Apparatus for making Con-
crete Piling.
R. Balfour, Ottawa, Ont., Pile-Drivers.
H. W. Covey, Toronto, Ont., Gasoline
Engines.
H. Ditchburn, Rosseau, Ont., Stove-pipe
Length Connectors for Nesting Pipes.
F. G. Gutelius, Montreal, Que., Gates.
W. H. Scott, Ottawa, Ont., Cheese Cutters.
H. I. Frost, Hamilton, Ont., Gates, as-
signed to Frost Wire Fence Co., Lim-
ited, Hamilton, Ont.
E. J. Boyler, Peterborough, Ont., Explo-
sive Engines, two-third interest Court-
land J. Aggett, Peterborough, Ont.,
A. Stalker, Peterborough, Ont.
J. J. Lynes, Toronto, Ont., Car Fenders.
E. B. Barnhardt, Mitchell Square, Ont.,
Roller Bearings.
O. Cadot, Delorimier, Que., Windows.
J. W. Stodders, Morden, Ma., Steam
Boilers.



SUNSHINE FURNACE

BURNS COAL OR WOOD

The Sunshine is a good, "all
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And so perfect is the combustion
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What's left in the ash-pan is not
worth sifting.

Sunshine consumes less fuel, too.

Because its perfect system of

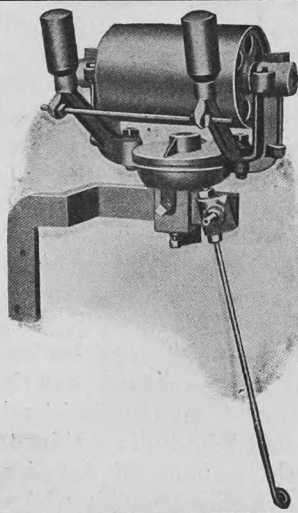
dampers prevent the escape of the
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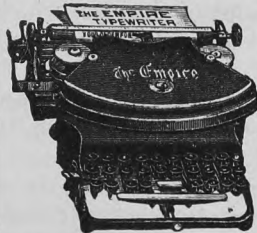


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Automatic in every sense of the
word. It requires no attention.
Adjusts the drive belt to every
varying condition. The belt
must travel squarely over the
pulley. The engine need not be
in line with the separator. A belt
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Canada's Standard Typewriter.

Visible Writing. Strictly Up-to-date.
Used by Both Railroads.

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All Dross Eliminated. The Original Perfected.

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Send for circulars describing our full line, including Corn Mills,
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Please mention The Canadian Thresherman and Farmer.

SUNNY ALBERTA

The Colorado of Canada

The Alberta Railway has 300,000 acres choice fall and winter wheat lands for sale.

These lands are situated in Alberta's warm belt, a short distance north of the Montana boundary, and at the east base of the Rocky Mountains.

Prices.—\$7.50 to \$8.50 per acre near railway; \$6.50 to \$7.50 per acre back from railway. In blocks of 5,000 acres and over, special prices of \$5.50 to \$6.50 per acre are given.

Terms.—Retail, \$2.00 per acre cash; wholesale (5,000 acre blocks), \$1.25 per acre cash. Balance in five equal annual instalments, interest 6 per cent.

Attractions.—Rich soil, mild climate, good markets, good railroad facilities, cheap fuel, etc.

For maps, printed matter and other information, address C. A. MAGRATH, Land Commissioner, Lethbridge, Alta.; or Osler, Hammond & Nanton, Winnipeg, Man.

NOTE.—In 1905 the first car of winter wheat was shipped from Lethbridge on August 12th.

Canada's Name is Hut Collection.

HOW THE ENGLISH COLONIES OBTAINED PRESENT NAMES.

How did Canada come to be called Canada? Just how many Britons could answer that simple little question on the spur of the moment? Very few, it is safe to say. Yet Canada is one of the most prized jewels in the British crown.

The name of Canada comes from a Red Indian name, meaning a collection of huts. Rather a funny appellation for a country bigger than Uncle Sam's very own United States!

It is interesting and even fascinating to consider how some of our possessions came to get the names which they bear nowadays. Newfoundland was the first of all the British colonies, and its name speaks for itself. It was not merely the first British colony, but the first bit of the "New World," as America was called in the days of its discovery, which Britons took possession of.

Fustralia signifies, literally, the land in the south. For ages before its discovery the ancients had a vague suspicion that there was a vast, mysterious, unknown land in the south seas, and in the early years of the seventeenth century the existence of the big island was put beyond doubt by a Spaniard named Torres and a Dutchman named Dirk Hartog.

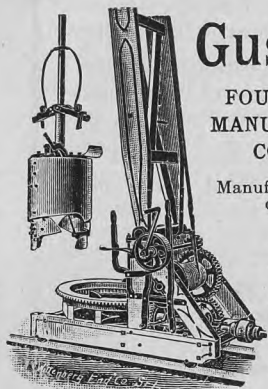
A portion of Australia was named after a Dutch discoverer, Van Diemen's Land, but this was afterwards changed to Tasmania in honour of another Dutch navigator. Van Tasman, who was thought to have more right to distinction. Victoria was, of course, named after the late Queen Victoria.

New Zealand also owed its discovery to Tasman. The Dutchman, however, did not take possession of it, but contented himself with naming it after the province of Zealand in Holland. Captain Cook was the first white man to land on the island.

Neither had John Bull anything to do with the naming of Jamaica. Columbus, who discovered it, wished to call it San Jago, but the name never stuck. The name given to it by the brown-skinned Caribs, who were its original owners, was Chamaiks, or Island of Springs, which has been twisted into its present shape.

Trinidad was so named because Columbus first sighted it on Trinity Sunday, 1496. Barbados was named by the Portuguese on account of the numerous bearded fig-trees which they found there. The island of St. Christopher was named by Christopher Columbus—after himself.

A peculiar interest attaches to the naming of the island of San Salvador one of the Bahamas. The long voyage made by Columbus across the then trackless Atlantic seemed to his crew as if it were never going



Gus Pech

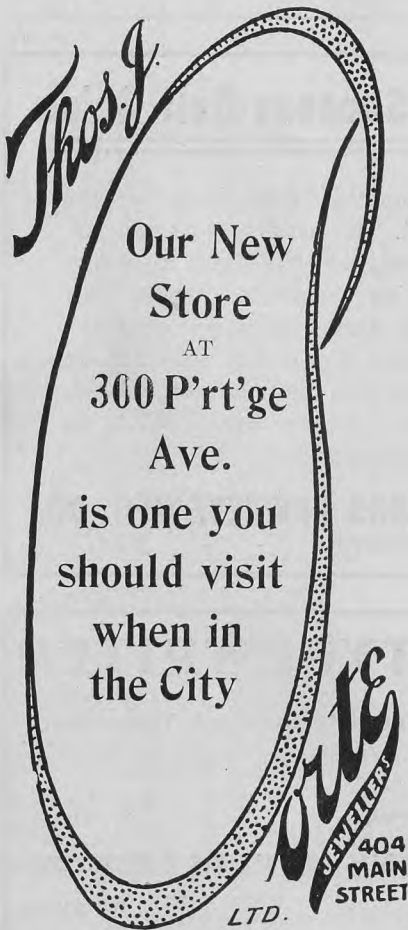
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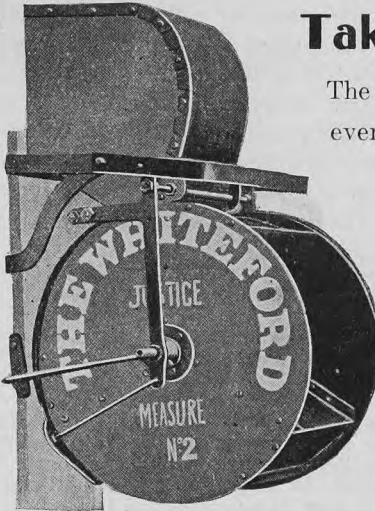
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THRESHERMEN

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Some of Its Points

Measures the grain correctly, no matter what weight it is. Automatic. Requires no attention, cannot go wrong. Built entirely of steel. Is perfectly fair. Makes no difference how your machine

is set. Is Government tested. Ends all disputes about collecting. Fitted to your old Bagger. A limited number will be on the market this season.

Write for prices and further particulars to

The Virden Mfg. Co.

VIRDEN, MAN.

SUPPOSE A MAN

whom you knew to be responsible, came to you and said, "I can increase your engine three horse power, give you a better working engine, save fuel and oil," would you stop and listen to what he had to say? And if he was willing to give you a guarantee to that effect wouldn't you say, "You are the fellow I am looking for. You can do business with me in short order if you will show me. Just tell me who has your valve and if they say your valve is working as you claim it works you can do business with me." That would be business, wouldn't it?

The above is our offer. This is our guarantee:

To increase the power of a traction or portable engine from 18 to 30%.

To save 50% of your oil.

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To give increased capacity and greater economy.

It is not what you earn, but what you save that pays for the valve.

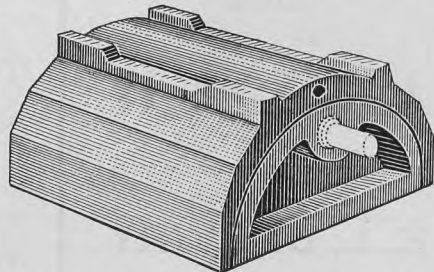
One cent invested in a postal card brings you our catalogue. Tells you who has the valve and how they like it. Send for it.

Agents wanted.

Write for contract.

GOULD BALANCE VALVE CO.,

Kellogg, Iowa.



The World's Champion Adjustable Sieve

Plain facts are what count. Threshermen buy the original Adjustable Sieve. There are more Ditch Adjustable Sieves used than all others combined. It is the only Sieve that will adjust fine enough for seeds, the only adjustable sieve constructed on mechanical principles, the only Sieve that does not cut up the blast, and over which you get as smooth a blast as over the sheet metal sieve. Read what one customer says:

TESTIMONIAL.

Monroe City, Mo.

The Ditch Adjustable Sieve Co.

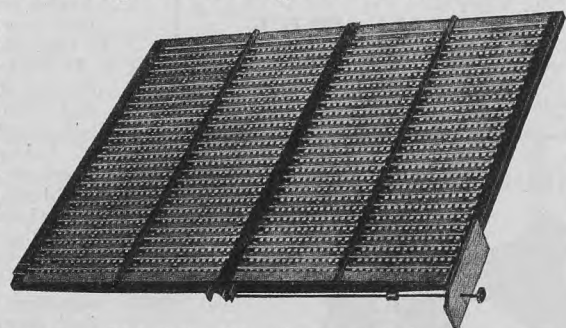
I have threshed wheat, oats, rye, speltz and timothy, and was not bothered one minute. Timothy headed two years ago piled up and rotten, yet my sieve handled it in great shape. I use it in an Advance Separator.

Yours very truly,

PONY WILSON.

Write for circulars on our famous Screw Feed Flue Expander.

DITCH ADJUSTABLE SIEVE CO.
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**GRAND
TRUNK
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SYSTEM**

Solid, Wide, Ves-
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SLEEPING CARS

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Taxes or Revenue Which?

\$2,000 will buy a city lot. It will also buy 5 acres of orchard in the Kootenay. Unless you improve the lot means taxes. The Five Acres mean income, big income, too. It's a case of worry versus contentment.

Then, there's the speculative side. In five years your orchard will be producing annually more than its cost. Will the lot? We guess not. In five years your orchard will be worth \$1,000 an acre—250% increase. Will the lot? Perhaps. You can manage the orchard yourself or stay away.

We have unimproved land at \$75 an acre—the kind that is selling for \$100, \$125 and \$150.

We have cleared or partly cleared but not planted land at \$175 to \$250 an acre. All in the famous

Cold Spring Ranch

British Columbia's Star is in the ascendant. It is the vogue. Were you in at the start in the wheat country? Well, here's a similar chance in British Columbia. Look into our syndicate propositions.

Free Excursions! Free Excursions!

HANSEL, LANGAN, KNAPPEN CO.

Chicago, Winnipeg, Nelson, B.C.
Call or Write. Open Evenings.
35 Aikins Building, Victoria Block,
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CAPITAL PAID UP - - - \$4,700,000

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WINNIPEG BRANCH

N. G. LESLIE Manager.

to end, and many of them were afraid that the ship would suddenly go over the edge of the world and carry them to destruction. At last they were so shaken that they forced their leader to promise that if land was not sighted by a given time he would turn back for Spain and abandon his quest for the new world.

After this the great navigator kept false reckonings to deceive his men and gain time. But day after day dragged by, and no land appeared on the limitless expanse of waters. At last, on October 11, 1492, the crew swore that if land was not touched by the next day they would turn back and kill Columbus if he did not consent.

Through the dark night that followed the admiral watched with straining eyes. Suddenly at 2 o'clock on the morning of the 12th one of the crew, Rodrigo de Triana, sighted land. It was one of the Bahamas, and Columbus named it after the Saviour in gratitude.

A rich reward had been promised to the man who should first sight land in the new world; but poor Rodrigo de Triana, though he richly merited the reward, was shabbily cheated out of it. This piece of injustice so embittered him that on his return home he betook himself to Africa and became a Mohammedan out of sheer disgust and disappointment.

Natal is so named because it was discovered by the famous Portuguese sailor, Vasco de Gama, on Christmas Day, 1497, so that it should remind all men of the nativity. St. Helena, the prison of Napoleon, was named for a similar reason. It was discovered—also by a Portuguese—on St. Helena's day, 1501.

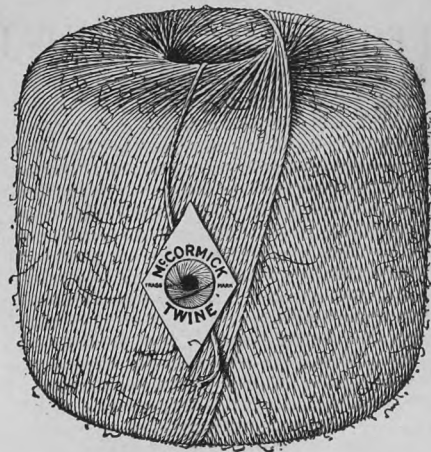
Gibraltar was once Gib-el-Tarik—Rock of Tarik. When the Moors poured from Africa to invade Spain in 711, they passed the straits over the great fortress flung out into the sea by nature herself, and called it after their fierce commander, Tarik.

Singapore means the City of Lions and was the name bestowed on the now thriving "Liverpool of the Straits Settlements" by the Japanese, who were the first settlers.

The vast empire of India has, strictly speaking, no name of its own. Hindustan only means the Land of Hindus, who are but a portion of King Edward's Asiatic subjects, and it is not recognized by the Rajputs, the Mahrattas, the Bengalese, or the other races of the peninsula. India itself means "the river," and has gradually come to describe the entire land of the mighty Indus.—Pearson's Weekly.

Look out now for the breeding mare. See that she has plenty of exercise.

Moderate work up to almost foaling time will not injure her. It is much better after the colt is born that she should have her liberty.



GOOD BINDER TWINE

Prevents Loss of Time and Grain

Twine that kinks and breaks is dear at any price. Poor twine very frequently causes delays of sufficient length for heavy rains to destroy more than enough grain to pay for the twine used in the entire harvest season.

Users of McCormick twine never experience these difficulties. The reason for it is that the McCormick twine is the embodiment of all that is best in twine. From the time the bales of raw material are broken open until the balls are wound, sacked and stowed away ready for shipment, the most rigid system of inspection is maintained. When the bales are opened the fibre is carefully selected, and that which is not good is thrown out. Throughout the process of preparation for spinning any inferior material that escapes the first inspection is promptly discarded. The spinning is carefully watched and every inferior piece of yarn is rejected. The balling is done under very close surveillance, every individual ball is carefully inspected, and anything indicating inferior quality is cast away. This is why the McCormick twine is so favorably known and widely used. It has full length, full strength, excellent quality and evenness of strand. When once you use the McCormick twine, you will use no other.

McCormick twine is made in four brands: Sisal, Standard, Manila and pure Manila.

Call on the nearest local agent and have a talk with him about the McCormick twine.

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The best all-round Stacker manufactured. It does double duty. Agents wanted. Write for catalogue.

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Have you heard of that Yankey invention known as



Ridler's Automatic Flue Cutter?

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One 25 h.p. Buffalo Pitts traction engine (straw burner) used short time. In good condition.
 One 22 h.p. Buffalo Pitts traction engine (straw burner) used four seasons, in good condition. A bargain.
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 One 18 h.p. John Abell traction engine (straw burner), in good order. This engine will be sold cheap.
 One 20 h.p. Sawyer-Massey portable engine (straw burner). This engine has been thoroughly overhauled, and is in perfect condition.
 One 44x66 J. I. Case separator, feeder, high weigher and Jones stacker. This machine is in good condition. Will sell cheap.
 One 30 h.p. Port Huron compound traction engine. In good shape, run only part of two seasons.
 One 25 h.p. J. I. Case simple traction engine, run three seasons. In good shape.
 Write for Price—

HAUG BROS. & NELLERMOE LTD., WINNIPEG, MAN.

FOR SALE—A bargain. One second-hand 25 h.p. stationary boiler, good condition with 50 ft. of stack and 20 h.p. Watrous Stationary Engine, good condition; will sell at a sacrifice or trade for smaller engine. Write at once. Frieson Bros, Steinbach, Man.

SNAPS in Second-Hand Machinery.

One 22 H. P. (Battle Creek) Advance Simple Traction Engine—\$1,600.00.
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 One 17 H. P. Minneapolis Compound Traction Engine—\$1,000.00.
 One 20 H. P. Northwest Simple Traction Engine—\$1,000.00.
 One 14 H. P. Haggart Portable Engine—\$250.00.
 One 14 H. P. Waterloo Portable Engine—\$600.00.
 One 17 H. P. George White Traction Engine—\$500.00.
 One 36x56 (Battle Creek) Advance Separator—\$250.00.
 One 36x62 Minneapolis Separator—\$200.00.
 One 40x62 J. I. Case Separator—\$250.00.
 Second-Hand Windstackers, Feeders, and Weighers can be supplied with any of above Separators. Threshermen looking for bargains should write us re above.

THE AMERICAN-ABELL ENGINE & THRESHER CO., LIMITED, WINNIPEG, MAN.

FOR SALE—Peerless Steam Ploughing Outfit. Absolutely the best. 30 h.p., double cylinder engine. All steel gears. Eight ploughs, each independent and operated by steam lift from engine. Has run 25 days. Perfect condition. Cost new, wholesale, without any agent's commission \$3225. Will sell for \$2225. Selling because land not suited for this work. J. A. Watson, 1034 Andrus Bldg., Minneapolis, Minn.

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The following and other second-hand machinery:
 One 20 h.p. Simple, double cylinder straw burning engine, built by Reeves & Company, and has seen three seasons service in threshing.
 One 27 h.p. Robert Bell straw burning engine; run two seasons; used for threshing purposes only.
 One 18 h.p. Watrous engine. This engine has seen several years service, but is still in good running condition.
 One 20 h.p. Simple, double cylinder, straw burner Reeves engine; been used for threshing purposes only a little more than two years.
 One 18 h.p. Battle Creek Advance engine, which has seen about six years service.
 One 36x60 Advance separator with feeder, tall weigher and stiff stacker.
 One 36x56 Battle Creek Advance separator with Parsons feeder, high weigher and stiff stacker.
 We have the majority of the above machinery on hand in Winnipeg; the balance of it we expect to ship in very soon, and any one of the above machines will be put in first-class condition, and service practically equal to that of a new machine may be gotten out of any of the machines above described.
 If you are interested in second-hand machinery, we shall be pleased to have you write us, and if nothing listed above will suit you, we can likely find others for you, and the prices will be right.

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FOR SALE—Pair of French Bur Millstones, 26 inches under runner in frame, complete for work. Capacity for chopping 30 to 40 bushels per hour. Can grind fine for Graham flour if you choose. Will sell cheap. F. O. B. at Dufrere or Winnipeg. Apply John Bell Sr., Rosewood, Man.

REBUILT MACHINERY.

Engines:—
 One 25 h.p. double cylinder Gaar-Scott traction
 Two 18 h.p. Gaar-Scott tractions.
 One 20 h.p. Watrous portable.
 Separators and Attachments:—
 One 36x60 Gaar-Scott.
 One 36x58 J. I. Case.
 One 40x62 J. I. Case.
 One 36x56 Sawyer & Massey.
 One 40x64 Advance.
 GAAR-SCOTT & CO., WINNIPEG MAN

THRESHING MACHINE FOR SALE.

33x52 Gaar-Scott Separator, run four falls, rebuilt last fall; Parsons Hawkeye Feeder, run two falls; Perfection high loader and weigher, run two falls; Jones blower, run three falls; all in good order and ready to work. Price \$600.00. Terms to suit. Apply to Wickham & Son, Brookside, or to V. C. McCurdy, Moosomin, Sask.

FOR SALE.

One—12 h.p. Case Compound Traction Engine, 36x58 Case separator, feeder, weigher and folding stacker in exceptionally good shape, \$2,000.
 One—12 h.p. Case Centre Crank Traction Engine, 36x58 Case separator, feeder and weigher, a bargain at \$1,000.
 One—J. M. Ross 16 h.p. Portable Engine. Monarch separator, hand-feed, folding and wind stacker, perfection weigher, \$950.
 One—20 h.p. Case Simple Traction Engine in A condition, \$1,400.
 One—15 h.p. Case Compound Traction Engine in first-class shape, \$1,350.
 One—Case Plowing Attachment, good as new, \$150.
 One—40 inch Hawkeye Feeder, new, \$195.
 A number of Weighers and Baggers.
 All the above machinery has been OVERHAULED THOROUGHLY and rebuilt. Write for particulars.
 J. I. CASE THRESHING MACHINE COMPANY
 WINNIPEG, MAN.

WANTED—Position as stationary or traction engineer by thoroughly competent and qualified young engineer (Saskatchewan). Acquainted with all kinds of boilers, also capable machinist. Address: Thos. Moore, Box 706, Virden, Man.

WANTED—Position as engineer on steam plow by expert traction engineer. References furnished. Chas. Tudge, Culross, Man.

FOR SALE.

One 25 h.p. Nichols & Shepard S.C., S.B. traction engine.
 One 40x60 Nichols & Shepard Red River special separator, fitted with N. & S. wind stacker; self feeder and Dakota style Perfection weigher, all in first-class repair. Price quoted on application.
 One 25 h.p. Nichols & Shepard S.C. S.B. traction engine.
 One 36x56 N & S Red River special separator, fitted with N. & S. Gear wind stacker, self feeder and Peoria weigher. Price quoted on application.
 One 18 h.p. American-Abell S.C. S.B. traction engine. Price quoted on application.
 One Low-down Tank pump without hose. Price \$6.00.

NICHOLS & SHEPARD CO., WINNIPEG, MAN.

WANTED—Situation as Engineer, job on plowing engine preference, good references. Address P. O. Box 29, Wolseley, Sask.

WANTED—Position with a good farmer in Western Canada, by the year. Have had experience in Ontario but would prefer the West. Address Noble James, Millbrook, Ontario.

FOR SALE. FULL RIGS.

21 h.p. Port Huron compound traction engine, equipped with straw burner, boiler jacket, Mason-Kipp oil pump, Waters governors.
 36x60 h.p. Rusher separator, equipped with Rusher stacker, Port Huron feeder, Perfection weigher and loader, Dakota style.
 This outfit has been run three short seasons, is in first-class condition and guaranteed the same as new machinery.
 30 h.p. Port Huron compound traction engine, equipped with straw burner and jacket.
 40x64 Port Huron Rusher separator, equipped with Rusher stacker, Hawkeye feeder, Perfection weigher and loader, Dakota style.
 This outfit has been run two seasons, is in first-class condition, and will be guaranteed as good as new machinery.

ENGINES.

21 h.p. Port Huron compound traction engine, 26 in. drive wheel, locomotive boiler, 46 two-inch flues, friction clutch, cross head pump, one injector, Mason-Kipp oil pump.
 17 h.p. Sawyer & Massey simple traction engine, in good working order.

SEPARATORS.

36x60 Port Huron Rusher separator, equipped with Rusher stacker, Port Huron feeder.
 This separator has run two seasons, is in good condition and will be guaranteed the same as new machinery.—Canadian Port Huron Co Limited, Winnipeg, Man.

CANADIAN PORT HURON CO., Ltd.
 ENGINES.

ENGINEER desires position in charge of steam plowing outfit or otherwise. 17 years experience with boilers and steam or gasoline engines. Can make all engine repairs. First-class references. Apply to R. N., care Canadian Thresherman and Farmer.

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One complete threshing outfit, consisting of a Minneapolis 22 h.p. traction engine, and Toronto Advance separator. All complete with blower, feeder and high bagger. This is a regular \$3,800 outfit. To make a quick sale we will accept \$2,300.—Address J. & E. Brown, Portage la Prairie, Man.

420 Acre Farm FOR SALE. Sec. 20, Town 6, Range 3 East; Near Otterburn, Man. Emerson Branch C. P. R. Is a first class farm, ground A ONE. Stock and implements in bargain. Possession at once. Good frame house, and frame stable. Any parties wishing to see farm, write and I will meet them at Otterburn. John More, Otterburn, Man.

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Causing great excitement wherever exhibited. Fuel drawn principally from atmosphere. Uses 395 barrels of air while consuming one gallon of oil. Wood, coal and oil cost money. Only free fuel is air. Supply is unlimited. No trust in control. Air belongs to rich and poor alike.

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Automatically generates gas from Coal Oil, mixing it with air. Burns like gas. Intense hot fire. Combustion perfect. To operate, turn knob, oil runs to burner, touch a match, it generates gas, which passes through air mixed, drawing about a barrel of air to every large spoonful of oil consumed. That's all. It is self regulating. No more attention. Same heat all day or all night. For more or less heat simply turn knob. To put fire out, simply turn knob. As near perfection as anything in this world. Not like those sold in stores. No leaks, nothing to clog up. No wick, not even a valve; yet heat is under perfect control. Cheapest fuel on earth. The only stove absolutely guaranteed to be safe from explosions. No hot, fiery kitchens. Not dangerous like gasoline. Simple, durable, last for years. Prices, 1 burner, \$3.75; two burners, \$7.50; three burners, \$11.50. Write to-day. All orders receive prompt attention.

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We have a large list of Winnipeg City Property to exchange for Farm Property.

List your Farm Property with us for quick sale or exchange.

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WANTED—Position as a steam engineer, young and strictly sober and steady, references furnished, am holder of license to operate in Saskatchewan. Harry Campbell, Maryfield, Sask.

FOR SALE.

One 18 h.p. Watrous Return Flue Boiler, Traction Engine. Thoroughly repaired and in good working order.

One 18 h.p. Phoenix Traction Engine. Built by Aultman & Co., with return flue boiler, thoroughly overhauled and repaired and put into first class running order.

One 17 h.p. Watrous. With return tubular boiler, repainted, and in good condition.

One 14 h.p. Stevens & Burns Engine. This engine is in splendid condition, having been thoroughly rebuilt.

One 17 h.p. Sawyer-Massey Engine. Fully repaired and repainted, and in good working condition. Return flue boiler.

One 36x60 McClosky Thresher. With geared blower, repaired and repainted, in good working order.

One 40x60 McClosky, with straw carriers, Hawkeye feeder, overhauled and in good condition.

One Ruth Feeder. This is new; never has been used, is for a 40-inch thresher.

One Rich Feeder, for 32 or 36 inch machine. In first-class condition.

One Fosston wind stacker, side fan, in first-class condition; for 56 or 60 inch thresher.

One Perfection wagon elevator, almost as good as new.

One Short Glendale weigher and bagger. New; never been used.

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ENGINEER wants position in charge of Steam Threshing, three years experience, sober, quick, economical. Satisfaction guaranteed. G. S. Gudmundson, Frammes, Man.

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FOR SALE.

One complete Threshing Outfit for sale at a bargain.

122-h. p. American-Abell Traction Engine.
 132x52 Northwest Separator, with Perfection Weigher, Hawkeye Feeder, Fosston Blower, 150 ft. Belt, 1 Caboose, mounted Steel Tank, and 1/2 round Wooden Tank. Price \$2500.00.

The above has been used only for about two seasons, part of it only one season. Every part is in good working order. Apply to

J. & E. BROWN, Portage la Prairie.

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25 h.p. Giant simple traction engine, rebuilt with tandem, compound added.
 20 h.p. Giant traction engine, rebuilt or as it stands.

25 h.p. Northwest simple traction engine, two years' old—in good order and a winner.

36 ins. Parson's feeder.
 17 h.p. Abel traction engine, rebuilt.

17 h.p. Sawyer-Massey portable engine, rebuilt. Dakota perfection weigher.

36x56 Northwest separator, with Parson's feeder, N.W. blower.

2—Hart wagon loaders, shop worn, a snap, practically good as new.

NORTHWEST THRESHER CO., BRANDON, MAN.